

V.—New South African Spiders of the families *Migidæ*, *Otenizidæ*, *Barychelidæ*, *Dipluridæ*, and *Lycosidæ*.—By W. F. PURCELL, Ph.D., *First Assistant*. (Plate VIII and 4 text figures.)

THE present paper contains descriptions of 64 new South African spiders, viz., 31 four-lunged spiders (3 *Migidæ*, 21 *Otenizidæ*, 5 *Barychelidæ*, and 2 *Dipluridæ*), and 33 two-lunged spiders (*Lycosidæ*). Most of those included in the first three families are true trap-door-building species, a group very numerous represented in South Africa, but as yet only imperfectly known.

FAMILY MIGIDÆ.

GEN. MOGGRIDGEA O. P. Cambr.

1. MOGGRIDGEA MORDAX n. sp.

Types.—6 ad. ♀ ♀ with cocoons and 5 nests (Nos. 12403–12408) from the low veld at the Hot Springs near Montagu, Cape Colony, found by my wife and myself in November, 1902.

♀ ♀. *Colour* of carapace, limbs, and chelicerae reddish yellow to olivaceous yellow, in parts even olivaceous; abdomen olivaceous black, or the under side pale yellowish.

Carapace wide, its length (measured laterally to the ocular area) exceeding that of the first tibia, metatarsus, and tarsus, and subequal to or a little shorter than the fourth tibia and metatarsus. Fovea strongly but not angularly recurved; a fine median groove sometimes present behind it. Ocular area about $2\frac{1}{4}$ – $2\frac{1}{2}$ times as wide as long, very like that of *M. seticoxa* Purc. (Ann. S. A. Mus., v. 3, p. 18, 1903), but its width considerably exceeding the length of first metatarsus; anterior median eyes less than a diameter apart and nearly twice a diameter or more from the anterior laterals, which are very large and nearly twice as long as the median eyes; posterior row recurved, the median eyes oval, larger than the laterals and

about as long as the anterior medians; clypeus not exceeding $\frac{1}{2}$ the diameter of an anterior lateral eye (generally much less).

Legs.—*Metatarsus* IV with 3-5 spiniform setæ in the apical tuft. *Tibia* I less than twice as long above as wide. *Patella* III with a broad anterior band of spines and setiform spines above. *Coxæ* II and III with a basal patch of sharp stout spinules, the patches sub-equal, III also with a few, more distal spinules below posteriorly, which are rarely absent.

Labium with 17-22 teeth in anterior part, of which the posterior ones are short; the teeth on the *coxæ of pedipalps* only in 1-3 rows in the distal half but numerous in the basal half.

Total length* 17-20 mm.

Cocoons.—The cocoon is a compressed oval sack with one end rounded off and the other more truncated. Its wall is very white and of a fine although tough and parchment-like texture. It is suspended just above the bottom of the burrow with the truncated end uppermost by means of some threads of silk running from the two upper corners to the sides of the burrow. One cocoon measured 18 mm. in length, 12 in width, and 7 in thickness, and contained 65 eggs, each about $2\frac{1}{3}$ mm. in diameter and in an early stage of development (end of November).

Nests.—The lids are D-shaped, rather thick and flat, becoming thinner at the margin all round. The hinge is very wide and

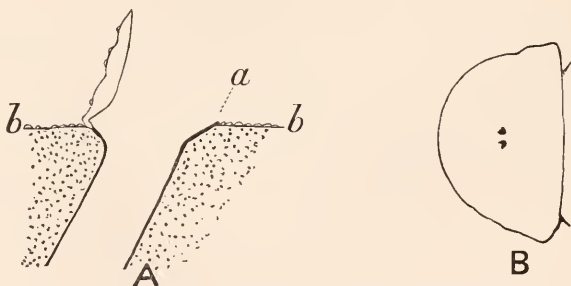


FIG. 1.—A, section through upper part of terrestrial trap-door burrow of *Moggridgea mordax* n. sp. (nat. size); B, lid of same, seen from below; a, edge of tube-lining; bb, surface of ground.

occupies almost the whole of the truncated margin. The upper side of the lids is covered with earth and generally overgrown by a black fungus, while the under side is lined with white silk

* Total length includes the chelicerae but not the spinners.

and provided with a pair of conspicuous pits in the centre, which are always placed as in fig. 1b.

The hole descends at a considerable incline in the upper part and reaches a depth of $4-4\frac{1}{2}$ inches ($10-11\frac{1}{2}$ cm.). At the opening the tube-lining is suddenly bent outwards to form a depressed funnel-shaped, spreading rim about 2-3 mm. in width all round, against which the lid closes.*

It is characteristic of both *M. mordax* n. sp. and *M. terricola* E. Sim., that the lid is not placed with its upper surface flush with the ground but is distinctly raised above it, just as if it were a detached piece lying loose upon the veld. This circumstance makes it very difficult to distinguish these lids in the case of *M. mordax* from the many small flat pieces of earth which have become loosened from the cracked surface of the ground, so that one has generally to lift the piece before one can be certain whether it covers a nest or not.

2. MOGGRIDGEA LEIPOLDTI n. sp.

Type.—1 ♀ (No. 3619) found by Mr. C. L. Leipoldt on the road from Clanwilliam to Van Rhyns Dorp, Cape Colony, in December, 1897.

Closely resembling the foregoing.

♀. *Abdomen* pale yellowish, the hair-bearing tubercles black.

Carapace longer than the tibia, metatarsus, and tarsus of first leg, but shorter than the tibia and metatarsus of fourth leg. Fovea without the median groove. Ocular area with its width very slightly less than the length of the first metatarsus; posterior median eyes narrow elongate, twice as long as the small lateral eyes.

Coxa III with a basal patch of 26-27 stout short spinules, the other coxæ muticous.

Labium with 23 teeth on anterior half.

Total length 19 mm.

3. MOGGRIDGEA COEGENSIS n. sp.

Type.—1 ♀ (No. 5678) found by Mr. I. L. Drège at Coega, Uitenhage Division, in May, 1899.

* The nests of *Goryrella schreineri* Purc. (Ann. S. A. Mus., v. 3, p. 26, pl. 1, fig. 3, 1903) closely resemble these in many respects, the upper part of the hole being similarly inclined and similarly shaped in both, except that in *Goryrella* the spreading rim is much more steeply funnel-shaped to fit the strongly bevelled edge of the lid.

Allied to *M. mordax* n. sp.

♀. *Abdomen* olivaceous black, the opercula and the genital segment yellowish below.

Carapace wide, the thoracic portion almost rotundate; the length a little exceeding that of the tibia, metatarsus, and tarsus of first leg but less than that of the tibia and metatarsus of fourth leg. Fovea smaller, semicircular, with a small median groove behind it. Ocular area with its width exceeding the length of the first metatarsus; posterior median eyes oval, less than the anterior medians in length but a little longer than the small posterior laterals and rather remote from them.

Coxa III with a basal patch of spiniform setæ; II with a much smaller and scarcely distinct group (formed of 6-8 setæ placed closer together than elsewhere).

Labium with 20 teeth in anterior part.

Total length $14\frac{1}{2}$ mm.

The *Migidæ* (♀ ♀) from Cape Colony* may be grouped as follows:—

- a. Fourth metatarsus without apical infero-posterior tuft of spiniform setæ; femur of second leg with only fine hairs below. Nest arboreal and provided with two doors. Eastern Cape Colony † *Percilomigas abrahami* (O. P. Cambr.).
- b. Fourth metatarsus with an apical infero-posterior tuft of 3-5 spiniform setæ regularly arranged in a transverse row; femur of second leg with 1-2 rows of stout spiniform setæ below *Moggridgea* O. P. Cambr.
- a¹. *Coxa* of third leg with a basal patch of short stout spinules.
- a². *Coxæ* of first, second, and third legs with basal patch of spinules. Nest arboreal and with one door. ‡ Grahamstown and Uitenhage Division.
M. dyeri O. P. Cambr.
- b². *Coxæ* of second and third legs only with basal patch of spinules. Terrestrial. Montagu *M. mordax* n. sp.
- c². *Coxa* of third leg only with basal patch of spinules.
- a³. Posterior median eyes narrow elongate; the anterior laterals very large and convex. Clanwilliam or Van Rhyns Dorp Divisions.
M. leipoldti n. sp.

* *M. meyeri* Karsch (Zeit. ges. Naturw., v. 52, p. 384) is evidently a *Stasimopus* but certainly not a *Moggridgea*.

† The Museum has 1 ♀ from Seymour, Stockenstrom Division, and one with its nest from the Pirie Bush near Kingwilliamstown (*F. A. Pym*). The latter was found on a Knobwood Tree. The types came from Grahamstown. *P. pulchripes* E. Simon (Ann. Soc. ent. Belg., v. 47, p. 23, 1903), from Natal, differs according to Simon's description in having the anterior lateral eyes smaller, instead of larger, than the medians.

‡ The Museum has specimens from Grahamstown (*Dr. Schönland*).

*b*³. Posterior median eyes broadly oval or nearly rounded; the anterior laterals moderately large. Terrestrial. Cape Peninsula.

M. terricola E. Sim.

*b*⁴. Coxa of third leg with at most a basal group of short setæ.

*a*⁴. Anterior row of eyes (seen from above) with its front margin forming a straight or even very slightly recurved line, the lateral eyes comparatively small, their area only about twice that of the posterior lateral eyes. Nest arboreal and with one door. Cape Peninsula *M. quercina* E. Sim.

*b*⁴. Anterior row of eyes with its front margin forming a strongly procurved line, the lateral eyes very large and convex, their area many times larger than that of the posterior lateral eyes.

*a*⁵. Coxa of third leg with a distinct postero-basal group of shorter and more densely crowded (often spiniform) setæ on under side.

*a*⁶. Ocular area narrower, its width less than the length of metatarsus of first leg. Hanover . . . *M. seticoxa* Purc.

*b*⁶. Ocular area broader, its width greater than the length of metatarsus of first leg. Uitenhage Division

M. coeensis n. sp.

*b*⁵. Coxa of third leg muticous Terrestrial.
Worcester Division *M. peringueyi* E. Sim.

FAMILY CTENIZIDÆ.

GEN. STASIMOPUS E. Sim.

1. STASIMOPUS ERYTHROGNATHUS n. sp.

Types.—6 ad. ♀ ♀ (No. 2857) from the village of Worcester, Cape Colony, collected by Mr. Isaac Meiring in November, 1897, together with 2 nests.

♀ ♀. *Colour*.—Carapace brown, yellowish posteriorly; chelicerae reddish brown; pedipalps and legs brown, the 2 posterior pairs yellowish below and also in places above; coxæ of legs and posterior part of sternum more or less ochraceous; coxa of pedipalp reddish; anterior part of sternum fuscous brown; abdomen dirty pale yellowish, with broad dark patch above along the middle.

Carapace * as long as the patella and tibia together with $\frac{2}{3}$ — $\frac{5}{6}$ of the metatarsus of first leg and as the tibia, metatarsus, and $\frac{2}{3}$ — $\frac{1}{2}$ of the tarsus of fourth leg.

* The length of the carapace is taken laterally across the edge of the ocular area.

Ocular area.—Width behind less than or just equal to the length of the metatarsus of first leg and about $\frac{3}{4}$ of the length of the fourth metatarsus; anterior row of eyes (viewed from above) procurved or with the posterior margins of the eyes in a straight line, the lateral eyes strongly transverse, elongate oval; the posterior row with the anterior margins in a straight or slightly recurved line; the median eyes small and subrotund, as far apart as, or very slightly further apart than, the anterior lateral eyes and distant about their own diameter or slightly more from the posterior lateral eyes; the latter oval, much larger than the posterior medians, their distance apart equal to or only slightly less than the width of the anterior row; distance between the posterior and anterior lateral eyes equal to $\frac{1}{2}$ or a whole long diameter of the latter.

Pedipalps with a band of about 10–14 short spines on inner side of the tarsus, mostly extending up to the base; the tibia with 2–3 stout spines and the patella mostly with 2–4 slenderer spines or setiform spines on the inner surface; tarsus with a basal patch of 22–40 minute spinules above, the tibia with a distal patch of 11–22 such spinules above.

Legs.—Tibia of *first leg* decidedly shorter than the metatarsus, its length a little less than the width of the posterior row of eyes (by less than the width of a lateral eye) but considerably greater than the width of the anterior row; tibia with an internal band of 5–9 short spines occupying the distal $\frac{1}{3}$ – $\frac{1}{2}$ of the segment, the upper side with a large apical patch of minute spinules extending over $\frac{1}{4}$ – $\frac{1}{3}$ of the dorsal length; metatarsus with a long dorsal band of such spinules occupying $\frac{3}{5}$ – $\frac{5}{6}$ of the length of the segment. *Third leg* with 13–22 spines in anterior and 22–34 in the posterior band on the metatarsus; patella with some stout short spinules along anterior side and a number of slenderer ones in distal part of upper surface; patch of red dorsal spinules on tibia large, occupying nearly the distal half of the dorsal length; metatarsus without apical tuft of setæ below. *Fourth leg* with the patch of red spinules on the patella very large, extending over more than $\frac{1}{2}$ (up to $\frac{2}{3}$) of the length of the anterior surface; the infero-posterior apical tuft on metatarsus composed of 6–9 subequal spiniform setæ regularly arranged in a transverse row.

Labium with 5–10 apical teeth.

Total length 36 mm.; length of carapace $11\frac{1}{2}$, width $9\frac{3}{4}$; length of metatarsus of first leg $4\frac{1}{4}$; width of ocular area 4.

Nests.—The nests resemble those previously described (Ann. S. A. Mus., v. 3, pp. 22 and 24) in general appearance, excepting that the

upper part of the tube is more widely funnel-shaped, being strongly widened all round, particularly at the hinge side, from about 10 mm. from the outer edge. The lids resemble those of *S. schreineri* in shape, the peripheral surface being strongly bevelled and passing over gradually into the lower surface at the rounded lower edge.

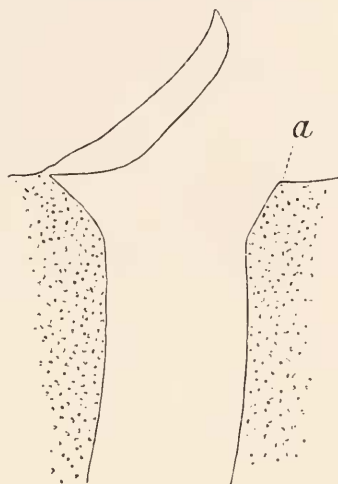


FIG. 2.—Section through upper part of trap-door burrow of *S. erythrognathus* n. sp. (nat. size); a, edge of tube-lining.

The under side is, however, provided with a circle of conspicuous pits, as in the lid of *unispinosus* Purc. The dimensions of a nest are as follows:—Width of lid taken parallel to hinge 30 mm., taken at right angles to hinge 31; width of hinge 6; width of hole at about 15 mm. from edge 19; average thickness of lid about $4\frac{1}{2}$.

2. STASIMOPUS BREVIPALPIS n. sp.

Specimens.—(a) Two large and 2 smaller ♀ ♀ and 1 ad. ♂ (Nos. 8846 and 8895) from the farm “Bonnie Vale,” at Bushmans Drift, on the Breede River, Swellendam Division (near Ashton), dug out of the ground by Mr. Charles Groom during the construction of a water furrow.

♀ ♀ (*Types*). Colour as in *S. leipoldti* Purc. (Trans. S. A. Phil. Soc., v. 11, p. 348) or even darker, the abdomen without conspicuous dark patch above.

Carapace as in the foregoing; its length sometimes equalling the tibia, metatarsus, and tarsus of fourth leg.

Ocular area.—Width behind exceeding the length of the tibia and shorter than or even very slightly exceeding the length of the metatarsus of first leg and about $\frac{3}{4}$ — $\frac{4}{5}$ of the length of the fourth metatarsus; anterior row of eyes (seen from above) lightly procurved or with the hind margins in a straight line, the lateral eyes large, broadly oval, transverse; the posterior row very distinctly recurved, the median eyes small, rotund, slightly further apart than the anterior lateral eyes and distant about their own diameter or slightly more from the posterior lateral eyes; the latter subrotund or slightly oval, small, subequal to or only slightly larger than the posterior medians, their distance apart very distinctly exceeding the width of the anterior row; distance between the posterior and anterior lateral eyes slightly or considerably exceeding the long diameter of the latter.

Pedipalps spined much as in the foregoing species, but the basal patch on the tarsus smaller, composed of only 9–20 spinules, and the distal patch on the tibia absent or composed of 1–4 spinules.

Legs.—Length of tibia of *first leg* decidedly less than that of the metatarsus and exceeding the width of the anterior row of eyes, but less than the width of the posterior row (often by more than the width of a lateral eye); tibia with a band of 5–10 spines occupying from $\frac{1}{3}$ to the whole of the length of the inner surface, the upper side with a small distal patch of spinules occupying at most $\frac{1}{7}$ of the dorsal length, the basal patch on the metatarsus long, almost equaling but not exceeding half the length of the dorsal surface. *Third leg* with 14–21 spines in the anterior and 18–23 in the posterior band on the metatarsus; patella with some short stout spines along anterior surface and a few (not more than a dozen) or no slenderer spinules in distal part of upper surface; patch of red spinules on tibia occupying only about $\frac{2}{3}$ of the dorsal length; metatarsus without apical tuft of setæ below. *Fourth leg* with the patch of red spinules on the patella large, occupying from $\frac{1}{2}$ — $\frac{2}{3}$ of the length of the anterior surface; the infero-posterior apical tuft on the metatarsus composed of 6–8 subequal spiniform setæ regularly arranged in a transverse row.

Labium with 4–8 apical teeth.

Total length 30 mm.; length of carapace 10, width $8\frac{3}{4}$; length of metatarsus of first leg $3\frac{1}{2}$; width of ocular area $3\frac{1}{2}$.

♂. *Colour*.—Carapace and chelicerae reddish black, the latter with dark reddish bands above; abdomen fuscous-yellow above, paler below; pedipalps and 2 anterior pairs of legs blackened proximally

but becoming pale ochraceous distally, the 2 posterior pairs pale fusco-ochraceous, the femur of third leg strongly darkened; sternum pale ochraceous, infuscated anteriorly and at the sides; 2 posterior pairs of coxæ pale ochraceous below, the other coxæ more or less dark brown.

Carapace with the thoracic portion covered with confluent granules and ridges, which become sparser and weaker at the anterior lateral angles; the cephalic portion covered with coarse shallow pits on each side in the posterior part, the anterior part transversely and weakly striated at the sides, the upper part with 3 low keels, of which the lateral ones are abbreviated behind but the median one is continued to the fovea. Carapace a little longer than the metatarsus of first leg and subequal to that of fourth leg. Eyes much as in the ♀.

Pedipalps not quite reaching to the apex of the tibia of first leg when stretched out in front; the femur curved, concave on the inner side; the tibia swollen, fusiform, the outer side very convex and the inner side straight, almost $\frac{3}{4}$ as long as the metatarsus of fourth leg and about $\frac{2}{3}$ as long as the carapace; the patella short, its length only a little exceeding $\frac{1}{2}$ the tibia and equal to $\frac{1}{2}$ the tibia of first leg; spine of palpal organ much longer than the bulb, the basal three-fourths thicker, gradually tapering and slightly curving downwards the distal portion slender and filiform, strongly curving outwards.

Legs.—*First leg* long and slender, the tarsus swollen and scopulate below, with 0 internal and 1–2 external spines; metatarsus slightly curving downwards distally, scopulate below in the distal fifth or sixth, the under side thickly spined on each side and also with 1–3 spines along the median line; tibia decidedly shorter than the metatarsus, spined below and on the inner side; patella strongly spined distally. *Second leg* like the first, but shorter, sometimes without spines along the median line of metatarsus below. *Third leg* with the tarsus slightly swollen below and scopulate, with 4–6 anterior and 7–9 posterior spines; metatarsus almost straight (except quite at base); the spines otherwise much as in the ♂ of *S. schreineri* Pure. (Ann. S. A. Mus., v. 3, p. 21). *Fourth leg* with the tarsus stout, slightly incrassated from the base distally, scopulate almost to the base and furnished with 2–3 internal and 14–15 external spines; metatarsus very slightly curved, with infero-posterior tuft of setiform spines; tibia with 6–9 external spines; patella with a patch of spinules extending over half the length of anterior surface.

Total length 15 mm.; length of carapace $6\frac{1}{4}$, of pedipalp (including coxa) $15\frac{3}{4}$, of first leg $26\frac{1}{2}$.

(b) 1 ad. ♀ (No. 12394) with nest and cocoon from Ashton Station, Robertson Division, collected by Mr. T. O'Connor.

Cocoon.—The cocoon resembles that of *S. quadratimaculatus* n. sp., described further on (p. 79).

Nest.—The nest resembles that of *S. erythrognathus* n. sp., but is smaller. The lid was firmly fastened down, as is usually the case during the hatching period, being attached all round the lower edge to the lining of the tube by means of silk. The dimensions are as follows:—Width of lid taken parallel and at right angles to hinge 22 mm.; width of hole at 10 mm. from edge $16\frac{3}{4}$; width of hinge 15; average thickness of lid about 4; length of occupant $29\frac{1}{2}$, width of its carapace $7\frac{3}{4}$.

3. STASIMOPUS QUADRATIMACULATUS n. sp.

Specimens.—6 ad. ♀ ♀ (types; Nos. 12397–12402) with 5 of the nests, 2 also with cocoons, from the low veld at the Montagu Baths, collected by my wife and myself in November, 1902. Also, 2 immature specimens (one with the nest) from the same locality.

♀ ♀. *Colour* as in *brevipalpis* n. sp., but the abdomen with a small but very distinct quadrate infuscate mark anteriorly above and generally also a large infuscate patch posteriorly above the spinners.

Carapace as long as the patella and tibia together with $\frac{2}{3}$ or the whole of the metatarsus of first leg and as the tibia and metatarsus together with $\frac{3}{4}$ or the whole of the tarsus of fourth leg.

Eyes much as in *erythrognathus* n. sp.; the posterior median eyes sometimes less than their own diameter from the posterior laterals.

Legs.—Length of tibia of *first leg* equalling or slightly exceeding (rarely less than) the width of the posterior row of eyes and often only slightly less than the length of the metatarsus; apical patch of spinules on the tibia small, occupying at most $\frac{1}{6}$ of the length of the dorsal surface; dorsal band on metatarsus I occupying from $\frac{1}{2}$ – $\frac{3}{4}$ of the length of the dorsal surface. *Third leg* with 12–21 spines in the anterior and 14–24 in the posterior band on the metatarsus; the distal dorsal spinules on the patella mostly setiform and sometimes absent. *Fourth leg* with 8–11 regularly arranged, subsetiform spines in the infero-posterior apical tuft of the metatarsus. Legs otherwise as in *erythrognathus* n. sp.

Measurements of adults.—Total length 27–32 mm.; length of carapace 10–11; width of ocular area in largest ♀ $3\frac{1}{2}$.

The two immature specimens have the posterior eyes closer together on each side.

Cocoons.—The white cocoon is of soft texture and subspherical in shape, except on one side, which is flat and provided round the edge, at least in part, with a narrow free flap (*aa*, fig. 3). An uninjured cocoon contained 43 eggs, each measuring about $2\frac{3}{4}$ mm. in diameter (in spirits) and still at a very early stage of development (November 25th). The cocoon is placed at the bottom of the burrow.



FIG. 3.—Longitudinal section through cocoon of *S. quadratimaculatus* n. sp. (nat. size).

Nests.—The nest closely resembles that of *S. unispinosus* Purc. (Ann. S. A. Mus., v. 3, p. 24, pl. 1, figs. 1–2), having the lids very thick and cork-like and generally much less strongly bevelled at the edge than those of the two preceding species. The lower edge also is more angular and less rounded. The lids of the adults measure $23\text{--}27\frac{1}{2}$ mm. across (taken parallel to the hinge) and $5\frac{1}{2}\text{--}9$ mm. in average thickness, the diameter of the hole at 1 cm. from the edge being $16\frac{1}{2}\text{--}18$ mm. All the holes measure 18–19 cm. in depth, and they are not enlarged at the bottom. In every case the spider was found at the bottom of the hole.

These nests abound in the open veld near the Baths, and numbers of open and deserted ones were met with.

4. STASIMOPUS BIMACULATUS n. sp.

Type.—1 ♀ (No. 9942) from Willowmore, Cape Colony, collected by Dr. H. Brauns, in December, 1901.

Closely related to the foregoing.

♀. *Colour* brown, the carapace behind and the 2 posterior pairs of legs paler and more yellowish, the pedipalps ochraceous above along the middle of the patella and tibia, the 2 posterior pairs of legs and the 4 pairs of coxæ pale ochraceous; abdomen pallid, with small black dorsal patch in front and a larger one behind.

Carapace as long as the patella, tibia, and metatarsus of first leg and as the tibia, metatarsus, and $\frac{2}{3}$ of the tarsus of fourth leg.

Ocular area compacter than usual, its width behind just equal to the length of the tibia and slightly exceeding that of the metatarsus

of first leg and about $\frac{2}{3}$ or more of the length of the metatarsus of fourth leg. Anterior row of eyes (seen from above) with its posterior margin forming a slightly recurved line, the lateral eyes large, transversely oval; the posterior row markedly recurved, the median eyes large, oblique, slightly larger than the anterior medians, their distance apart distinctly exceeding the distance between the anterior lateral eyes and their distance from the posterior lateral eyes less than $\frac{1}{2}$ their own diameter; the lateral eyes oval, almost equalling or slightly smaller than the posterior medians, their distance apart subequal to the width of the anterior row; distance between the posterior and anterior lateral eyes subequal to the long diameter of the latter.

Pedipalps with a small distal group of about 4 spines on inner side of tarsus and a single apical spine on inner side of tibia; patella not spined; basal patch of red spinules on tarsus occupying $\frac{1}{3}$ or more of the dorsal length, the tibia with tiny distal patch above.

Legs.—Tibia of *first leg* slightly longer than the metatarsus, its inner surface with a distal patch of 8–11 small spines occupying $\frac{1}{2}$ or less of the length; basal patch of spinules on metatarsus long, occupying quite $\frac{2}{3}$ of the dorsal length; the distal patch on the tibia small, occupying about $\frac{1}{6}$ of the length of the dorsal surface. *Third leg* with 15–16 spines in both anterior and posterior band on the metatarsus; patella with a small patch of spinules in distal part of upper surface; the distal patch on the tibia occupying less than $\frac{1}{2}$ of the dorsal length; metatarsus without apical spines below. *Fourth leg* with 7–9 spines on the distal half of the inner surface of the tibia; infero-posterior tuft on metatarsus composed of 10–12 subequal spiniform setæ regularly arranged in a transverse row.

Total length $22\frac{1}{2}$ mm.; length of carapace 9, width 7; length of metatarsus of first leg 3; width of ocular area $3\frac{1}{2}$.

5. STASIMOPUS CASTANEUS n. sp.

Type.—1 ♀ (No. 5378) from Port Elizabeth, collected by Mr. I. L. Drège in 1899.

♀. *Colour*.—Carapace dark brown, only slightly paler posteriorly; chelicerae, pedipalps, and legs dark reddish brown, the 2 posterior pairs of legs paler and more yellowish below; sternum dark brown, pale yellowish posteriorly; abdomen dirty yellowish.

Carapace subequal to the patella, tibia, and metatarsus of first leg in length and almost as long as the tibia, metatarsus, and tarsus of fourth leg.

Ocular area.—Width behind about $\frac{3}{4}$ of the length of the fourth

metatarsus. Anterior row of eyes (viewed from above) with its posterior margin forming a straight line; the lateral eyes rather small, transverse. Posterior row with its anterior margin forming a straight line; the median eyes slightly transverse, their distance apart about their own diameter less than the distance between the anterior lateral eyes and their distance from the posterior lateral eyes equal to their own diameter; the latter eyes distinctly oval, scarcely larger than the medians, their distance apart equal to the width of the anterior row; distance between the posterior and anterior lateral eyes about $1\frac{1}{2}$ times the long diameter of the latter.

Pedipalps with a broad band of short spines on inner side of tarsus extending right to the base; the 4-5 spines on inner side of tibia short and stout; patella not spined; tarsus with small basal patch of spinules above, the tibia without distal patch of spinules above.

Legs.—Tibia of *first leg* equalling the metatarsus, its length subequal to the width of the posterior row of eyes; tibia with a distal patch of 10-14 small spines occupying $\frac{1}{3}$ - $\frac{2}{3}$ of the length of the inner surface; metatarsus with a basal patch of spinules occupying about $\frac{1}{5}$ of the length of the upper side, the tibia with a slightly smaller distal patch above. *Third leg* with about 28 spines in the anterior and in the posterior band on the metatarsus; patella with a dense patch of short red spinules in distal part of upper surface, the distal patch on the tibia extending over about $\frac{1}{2}$ the dorsal length; metatarsus without apical spines below. *Fourth leg* with the patch of red spinules on the patella very large, nearly reaching distal margin; the infero-posterior apical tuft on the metatarsus composed of about 10 subequal spiniform setæ arranged in a regular transverse row, the under side of the metatarsus with 2-3 spines along the middle; tibia also with several spines below.

Labium with 8 apical teeth.

Total length 33 mm.; length of carapace $10\frac{3}{4}$, width $9\frac{1}{2}$; length of metatarsus of first leg $3\frac{2}{3}$; width of ocular area $3\frac{1}{4}$.

6. STASIMOPUS UMTATICUS n. sp.

Type.—1 ♀ (No. 8848) collected near Umtata, Cape Colony, by Miss Pegler, and presented to the Museum by the Rev. F. C. Kolbe.

♀. *Colour* much as in *castaneus* n. sp.; the abdomen pale yellowish, slightly infuscated anteriorly above.

Carapace slightly shorter than the patella, tibia, and metatarsus of

first leg and equal to the tibia, metatarsus, and $\frac{2}{3}$ of the tarsus of fourth leg.

Ocular area.—Width behind about $\frac{2}{3}$ of the length of the fourth metatarsus. Anterior lateral eyes not very large, transverse; the posterior row with the anterior margins of the eyes forming a lightly recurved line, the small median eyes transversely oval, their distance apart slightly less than the distance between the anterior lateral eyes and their distance from the posterior lateral eyes about equal to their own diameter; the latter eyes distinctly oval and a little larger than the medians, their distance apart equal to the width of the anterior row; distance between the posterior and anterior lateral eyes a little exceeding the long diameter of the latter.

Pedipalps as in the foregoing species, except that the tibia has a few distal apical spinules above.

Legs.—Tibia of *first leg* as long as the metatarsus, its length exceeding the width of the posterior row of eyes by a lateral eye's diameter at least; spines and spinules as in the foregoing species. *Third leg* with about 21 spines in the anterior and 17–19 in the posterior band on the metatarsus; patella with a number of short stout red spinules at apex above, similar to those on the tibia. *Fourth leg* with the patch of red spinules on the patella very large, extending over at least $\frac{3}{4}$ of the anterior surface; the infero-posterior tuft on the metatarsus composed of about 11–12 setiform spines, the inner half of which are crowded together in a transverse row, while the outer (inferior) half are more irregularly arranged and scattered.

Labium with 5 apical teeth.

Total length $30\frac{1}{2}$ mm.; length of carapace 10, width $8\frac{1}{2}$; length of metatarsus of first leg $3\frac{1}{2}$; width of ocular area $3\frac{1}{5}$.

7. STASIMOPUS KENTANICUS n. sp.

Types.—2 ♀ ♀ (No. 12411) with nests, found near the village of Kentani, Cape Colony, by the Rev. F. C. Kolbe in 1902.

Closely allied to *umtaticus* n. sp., but differing in the following respects:—

♀ ♀. *Colour* of abdomen nearly black, the under side paler, the genital segment and the 4 lung-opercula pale yellowish; anterior spinners and basal segment of posterior spinners with a black mark at apex below.

Eyes.—Posterior median eyes not transverse, rather large, further apart than the anterior lateral eyes, their distance from the posterior laterals equalling or less than their transverse diameter; the latter

eyes longitudinally oval, smaller than the posterior medians and distant $1\frac{1}{2}$ –2 times their own length from the anterior lateral eyes.

Pedipalps.—Patella sometimes with an internal apical spine; tibia with a number of spinules in the small apical dorsal patch.

Legs.—Tibia of *first leg* equal to the metatarsus, its length exceeding the width of the ocular area (by about twice the width of a posterior lateral eye), the inner surface with 20–35 spines extending over more than the distal half of the segment; basal patch of spinules on the metatarsus extending over $\frac{1}{3}$ – $\frac{1}{3}$ of the length of the dorsal surface. *Third leg* with 25–33 spines in the anterior and a similar number in the posterior band on the metatarsus; patella with a number of setiform or sharply pointed black spines but no short, stout red spinules at apex above. Apical tuft of metatarsus of *fourth leg* composed of 8–12 spiniform setæ, of which only 4–7 of the inner ones are in a close-set transverse row, the rest being irregularly scattered and more separated, as in the previous species.

Labium with 8 apical teeth.

Total length (abdomen contracted) 27 mm.; length of carapace $11\frac{1}{2}$, width 10; length of metatarsus of first leg 3·8; width of ocular area $3\frac{1}{3}$.

Nests.—Lids thick, the under surface unevenly convex and strongly rounded at the edges, the peripheral surface not or only in places marked off from the under surface; ring of pits almost entirely obliterated. Hole as in the other species.

8. STASIMOPUS KOLBEI n. sp.

Types.—1 ex. in spirits (No. 5317) and 1 dried specimen (No. 4542), found near the mouth of the Qoloro River, Kentani District, Cape Colony, in 1899, by the Rev. F. C. Kolbe, together with a nest.

♀ ♀. *Colour*.—Yellowish brown, the chelicerae darker; the 2 posterior pairs of legs below, the 4 pairs of coxæ and the posterior part of the sternum pale yellowish; abdomen dirty pale yellowish, infuscated above.

Carapace equal in length to the patella, tibia, and $\frac{3}{4}$ or the whole of the metatarsus of first leg and to the tibia, metatarsus, and $\frac{1}{3}$ – $\frac{1}{2}$ of the tarsus of fourth leg.

Ocular area relatively longer and narrower than usual, its width only $2\frac{1}{2}$ times its length, being a little less than the length of the metatarsus of first leg and about $\frac{2}{3}$ of the length of the metatarsus of fourth leg. Anterior row of eyes (viewed from above) with its posterior margin almost straight (scarcely procurved), the lateral eyes

transverse and large; the posterior row with its anterior margin straight or scarcely recurved, the median eyes obliquely oval, larger than the anterior medians and posterior laterals and situated close to the latter, being distant from them only $\frac{1}{3}$ of an eye's diameter, their distance apart slightly less than or almost equal to the distance between the anterior lateral eyes; posterior lateral eyes oval, small, their distance apart subequal to the width of the anterior row, which is not very much less than that of the posterior row; distance between the posterior and anterior lateral eyes equal to or less than the long diameter of the latter.

Pedipalps with the broad band of short spines on inner surface of tarsus extending to the base; the 3-5 spines on inner side of the tibia scattered over almost the whole length of the segment; tarsus with a minute basal patch of only about 10 spinules above, the tibia with a similar distal patch of spinules.

Legs.—Tibia of *first leg* subequal to or slightly longer than the metatarsus, its length also considerably exceeding the width of the posterior row of eyes; internal band of spines on tibia occupying more than $\frac{1}{2}$ the length of the segment; basal patch of spinules on the metatarsus small, occupying $\frac{1}{6}$ – $\frac{1}{5}$ of the length of the upper surface, the tibia with a similar, slightly smaller apical patch. *Third leg* with about 15–18 spines in the anterior and a similar number in the posterior band on the metatarsus; patella with a distal patch of spinules above; the distal patch on the tibia extending over $\frac{1}{2}$ the length of the dorsal surface; metatarsus without apical spines above. *Fourth leg* with the large patch of red spinules on the patella extending over $\frac{2}{3}$ or less of the anterior surface; infero-apical tuft on the metatarsus composed of about 6–8 subequal setiform spines regularly arranged in a transverse row.

Total length of dried specimen $17\frac{1}{2}$ mm.; length of carapace $8\frac{1}{3}$, width $6\frac{3}{4}$; length of metatarsus of first leg 3; width of ocular area $2\frac{1}{2}$.

Nest.—Lid thick and cork-shaped, much like that of *S. unispinosus* Purc. (Ann. S. A. Mus., v. 3, pl. 1, figs. 1–2), the peripheral surface strongly marked and scarcely bevelled, except on the hinge side; under surface flattened, but with the ring of pits almost obliterated; hinge very broad.

The following is a synopsis of the species (♀ ♀) from Cape Colony in the Collection* :—

* *S. caffrus* (C. L. Koch), *S. meyeri* (Karsch) (see note on p. 72), *S. artifex* and *schönlandi* Poc., from Cape Colony, are not known to me.

- a. Metatarsus of fourth leg without infero-posterior apical tuft of setæ or spines
Species from Natal.
- b. Metatarsus of fourth leg with an infero-posterior apical tuft of setæ or spines
Species from Orange River Colony and Cape Colony.
- a¹. Metatarsus of third leg with a group of apical spines below.
- a². Metatarsus of fourth leg with the apical tuft composed of 4-5 subequal setiform spines regularly arranged in a transverse row and with 3-5 irregularly arranged other spines on the outer side of the tuft. Kingwilliamstown * *S. insculptus* Poc.
- b². Metatarsus of fourth leg with the apical tuft composed of a single, large stout spine, which is usually flanked on one or both sides by 1-3 much slenderer spines or spiniform setæ. Hanover . . . *S. unispinosus* Purc.
- b⁴. Metatarsus of third leg without group of apical spines below.
- a³. Ocular area very wide, its width behind equal to the length of the metatarsus together with $\frac{1}{2}$ or more of the tarsus of first leg and slightly less than or subequal to the length of the metatarsus of fourth leg; posterior row of eyes strongly recurved.
- a⁴. Patella of third leg with a number of slenderer dorsal spines at apex in addition to the stout ones along the anterior surface. Hanover
S. schreineri Purc.
- b⁴. Patella of third leg without any slenderer dorsal spines at apex. Clanwilliam *S. leipoldti* Purc.
3. Ocular area narrower, its width behind less than or only slightly exceeding the length of the metatarsus of first leg and about $\frac{3}{5}$ - $\frac{4}{5}$ of the length of the metatarsus of fourth leg.
- a⁵. Basal patch of spinules on upper side of metatarsus I long, extending over at least $\frac{1}{3}$ of the dorsal length of the segment.
- a⁶. Tibia of first leg shorter than the metatarsus; posterior median eyes small, distant more than $\frac{1}{2}$ their own diameter from the posterior lateral eyes.
- a⁷. Basal patch of spinules on metatarsus II not longer than the distal dorsal patch on tibia II; distal patch on tibia I occupying $\frac{1}{6}$ - $\frac{1}{3}$ of the length of the segment; basal patch on metatarsus I occupying less than $\frac{1}{2}$ the length of the segment; posterior lateral eyes about $1\frac{1}{2}$ - $1\frac{3}{4}$ times as long as the medians and separated from them by a little more than a diameter of the latter. Graaff Reinet † *S. palpiger* Poc.
- b⁷. Basal patch of spinules on metatarsus II distinctly longer than the distal patch on the tibia (generally twice as long or more).

* 1 ♀ from Kingwilliamstown (*F. A. Pym*).

† 1 ♀ from Graaff Reinet.

- a*⁸. Distal patch of spinules on tibia I large, extending over $\frac{1}{4}$ – $\frac{1}{3}$ of the length of the dorsal surface; metatarsus III with 13–22 spines in the anterior and 22–34 in the posterior band; posterior lateral eyes much larger than the medians. Worcester *S. erythrognathus* n. sp.
- b*⁸. Distal patch of spinules on tibia I small, extending over not more than $\frac{1}{6}$ of the length of the dorsal surface; metatarsus III with 12–21 spines in the anterior and 14–24 in the posterior band.
- a*⁹. Posterior lateral eyes much larger than the posterior medians; length of tibia I equalling or slightly exceeding (rarely slightly less than) the width of the posterior row of eyes. Montagu
S. quadratimaculatus n. sp.
- b*⁹. Posterior lateral eyes small, subequal to or only slightly larger than the posterior medians; length of tibia I less than the width of posterior row of eyes (often considerably less). Swellendam and Robertson Divisions *S. brevialpis* n. sp.
- b*⁶. Tibia of first leg slightly longer than the metatarsus; posterior median eyes large, larger than the anterior medians and separated by less than $\frac{1}{2}$ their own diameter from the posterior lateral eyes. Willowmore *S. bimaculatus* n. sp.
- b*⁵. Basal patch of spinules on upper side of metatarsus I small, occupying only about $\frac{1}{6}$ – $\frac{1}{5}$ (rarely nearly $\frac{1}{3}$) of the length of the dorsal surface.
- a*¹⁰. Ocular area much more than $2\frac{1}{2}$ times as wide as long.
- a*¹¹. Metatarsus IV spined along the middle below. Port Elizabeth *S. castaneus* n. sp.
- b*¹¹. Metatarsus IV without spines along the middle below (except quite at apex).
- a*¹². Length of tibia I subequal to or less than the width of the ocular area; all the setiform spines of apical tuft of metatarsus IV crowded into a transverse row. Pearston * *S. astutus* Poc.
- b*¹². Length of tibia I very distinctly exceeding the width of the ocular area; only the inner setiform spines of apical tuft of metatarsus IV crowded together in a transverse row, the outer (inferior) ones being more scattered and irregularly arranged.
- a*¹³. Patella III with a number of short stout red spinules at apex above, similar to those on the tibia. Umtata *S. umtaticus* n. sp.

* Several ♀ ♀ from Pearston (*Dr. R. Broom*).

*b*¹³. Patella III with the distal dorsal spines black and finely pointed at apex or setiform. Kentani

S. keutanicus n. sp.

*b*¹⁰. Ocular area only $2\frac{1}{2}$ times as wide as long. Kentani District

S. kolbei n. sp.

GEN. ACANTHODON Guérin.

1. ACANTHODON PECTINIPALPIS n. sp.

Types.—3 ad. ♂♂ (No. 9938) from Zululand, collected by Mr. W. Anderson, Director of the Geological Survey of Natal.

♂♂. *Colour* pale ochraceous, the legs often faintly tinged with greenish; abdomen deeply infuscated above, the under surface and the lower part of the sides pale yellowish.

Carapace with a number of setiferous granules on the thoracic and on each side of the cephalic portion; its length a little less than that of the metatarsus of fourth leg, and slightly exceeding that of the metatarsus of first leg.

Ocular area as wide as or even considerably wider than long; the area formed by the anterior median and anterior lateral (frontal) eyes parallel-sided or wider behind, about $1\frac{1}{2}$ – $1\frac{3}{4}$ times as long as the posterior width, the laterals (frontal eyes) larger than the medians and very close together; posterior row of eyes procurved, the medians small, almost or quite as far from the laterals as from one another, their outer margins the same distance apart as those of the anterior median eyes; the posterior lateral eyes large and reniform.

Pedipalps.—Tibia twice as long as the patella and twice as long as thick, with a deep excavation in distal part of infero-external surface, the outer and part of the proximal margins of the excavation armed with a semicircular band of stout spines, which are 2–3 rows deep proximally but in a single row distally, except quite at the apex; tarsus with 1 stouter and a couple of slenderer apical spines above; spine of palpal organ much longer than the bulb, very thick in the basal half, then suddenly bent and strongly attenuated from the middle onwards, the distal part being slender and filiform, with small sigmoid flexure at tip.

Legs.—*First leg* with the tibia shorter than the metatarsus and furnished distally at the inner lower edge with a pair of large tubercles, of which the distal one is produced into a stout, black spur-like process, while the proximal one is short and turgid, with sharply conical black apex; under side of tibia with 4–5 external but

no internal spines; metatarsus almost straight or very slightly curved, without concavity or thickening near base on inner surface, and furnished with 1-2 internal and 3-4 external spines; tarsus with 0-1 internal and 0-3 external spines. All the *tarsi* scopulate to the base. *Metatarsi* not scopulate.

Total length $8\frac{1}{2}$ - $11\frac{1}{2}$ mm.

2. ACANTHODON SPIRICOLA n. sp.

Types.—2 ad. ♀ ♀ (Nos. 12413-4, one with young) and 6 nests, found by the Rev. F. C. Kolbe under the shelter of roots in forests near the village of Kentani, Cape Colony, in 1902.

♀ ♀. *Colour* yellow; abdomen pallid, with the dorsal surface infuscated; cephalic portion of carapace slightly brown in places in one specimen.

Carapace (measured across outer side of frontal eye-tubercle) as long as the tibia, metatarsus, and tarsus of fourth leg and as the patella, tibia, and metatarsus of first leg.

Ocular area as long as wide, its width $\frac{3}{4}$ or slightly more of the length of the metatarsus of first leg. The area formed by the anterior lateral and anterior median eyes wider in front than behind and nearly twice as long as its posterior width, the median eyes about an eye's diameter apart; the anterior lateral eyes and the eyes of the posterior row like those of *A. kolbei* Purc. (Trans. S. A. Phil. Soc., v. 11, p. 354).

Legs much as in *A. kolbei*, but the tibia of *third leg* with 5-10 spines in the posterior dorsal band.

Labium with 2-4 apical teeth.

Abdomen not tuberculate above.

Total length 18 mm.; length of carapace 5.8, width $4\frac{1}{2}$.

Nests.—The silken tube is cylindrical, and always descends spirally to a depth of 6-8 cm. in the manner represented in the accompanying figure, which shows the nest in section seen with the hinge on the left. In the deeper part the tube is gradually widened, while at the upper end it becomes compressed and has an oval opening. The edges of the tube-lining are spread out horizontally on the surface of the ground, forming a flat rim about 1 mm. wide all round, except at the middle of the hinge. The latter is broad and situated along one of the longer sides of the oval rim. The lid, which is D-shaped in outline, is peculiar. Its upper surface is strongly but irregularly convex and covered with earth and a minute green vegetable growth and often also tiny pieces of moss.

The under surface is smooth and *concave right up to the edge*, which is quite sharp and fits against the outer edge of the outspread rim of the tube.

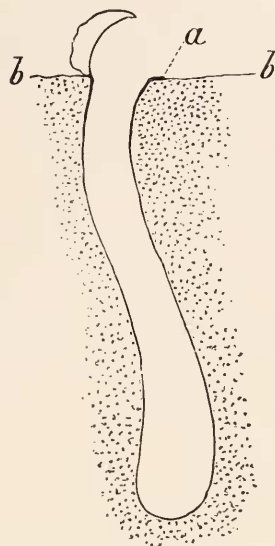


FIG. 4.—Section through trap-door nest of *A. spiricola* n. sp. (nat. size); *a*, edge of silken lining; *bb*, surface of ground.

Measurements of nest of the ♀ with young.—Width of lid and of rim of silken tube taken parallel to hinge 13 mm.; width of same taken at right angles to hinge 10; width of opening of tube $7\frac{1}{2}$ by $9\frac{1}{2}$; diameter of tube at 1 cm. from opening about $6\frac{3}{4}$ and near bottom $9\frac{1}{2}$; thickness of lid in centre 3; width of hinge $9\frac{1}{2}$; width of carapace of occupant $4\frac{1}{2}$.

3. ACANTHODON KENTANICUS n. sp.

Type.—1 ♀ (No. 12412) with nest, found by the Rev. F. C. Kolbe in open ground under an Acacia tree, near the village of Kentani, Cape Colony, in 1902.

♀. *Colour* pale greenish ochraceous, the yellow predominating in some parts, the green in others; carapace brown between the two groups of eyes; abdomen pallid (damaged above).

Carapace as long as the tibia, metatarsus, and $\frac{1}{4}$ — $\frac{1}{3}$ of the tarsus of fourth leg and as the patella, tibia, and $\frac{1}{2}$ of the metatarsus of first leg.

Ocular area long, much longer than wide, and extending backwards to almost midway between its anterior margin and the middle of the fovea; its width subequal to the length of the metatarsus of first leg. The area formed by the anterior lateral (frontal) and anterior median eyes wider in front than behind and very long, about 3 times as long as its posterior width; the median eyes small, about their own diameter apart; the lateral eyes much larger, very close together, and placed on a common tubercle, which is only shallowly grooved along the middle above, the visual axis less horizontal than in *kolbei* and *spiricola*. Posterior row of eyes with its posterior margin slightly procurved, the median eyes distinctly nearer to the laterals than to one another, the laterals large, about as far from the anterior margin of carapace as from one another.

Legs.—*First leg* with the tibia as long as the metatarsus and $\frac{2}{3}$ of the tarsus. *Tibia of third leg* with about 15 spines in the posterior dorsal band. *Legs* otherwise much as in *kolbei*.

Labium with 2 teeth.

Total length 18 mm.; length of carapace 5·8, width 4·9; length of ocular area 1·9.

Nest.—The tube is short ($4\frac{1}{2}$ cm. in depth) and perfectly straight, descending at a slight incline towards the hinge-side, as in *Stasi-mopus*. It is cylindrical and wide in the deeper part, but becomes narrower near the opening, which is only slightly oval. The lid is flat and rather thin but not flexible, resembling that of *kolbei*, the upper side being very rough and uneven, and the lower side smooth, flat and lined with white silk. The edge of the lid closes against the outspread rim of the tube-lining, as in the other species.

Measurements in millimetres.—Width of lid taken parallel to hinge $14\frac{1}{2}$ and at right angles to hinge 12 mm.; average thickness of lid $1\frac{1}{2}$; width of hinge $12\frac{1}{2}$; diameter of hole at 1 cm. from opening 9–10, near bottom 11.

4. ACANTHODON VERSICOLOR n. sp.

Type.—1 ♀ (No. 12001) found by Mr. D. L. Patrick on Bavian Kopje, three miles east of Umtali, Mashonaland, in June, 1902.

♀. *Colour*.—Carapace deep brown, paler mesially behind; chelicerae reddish black; legs deep brown, the tibiae, metatarsi, and tarsi of the 2 anterior pairs and the tibia and tarsus of the pedipalps reddish to reddish black, dark, especially at the sides; femora of all the legs and of the pedipalps with the under surface and the sides pale yellowish, contrasting sharply with the dark brown colour

of the upper surface of the femora and of the under surface of the trochanters and patellæ; abdomen blackish, the under side paler.

Carapace as long as the tibia, metatarsus, and $\frac{1}{4}$ of the tarsus of fourth leg.

Ocular area wider than long, its width $\frac{2}{3}$ of the length of the first metatarsus. Area formed by the frontal eyes and the anterior median eyes of the posterior group parallel-sided and about $1\frac{1}{2}$ times as long as wide behind; the frontal eyes about $\frac{1}{2}$ an eye's diameter apart, with the visual axis inclined upwards at an angle of about 45° ; anterior median eyes of the posterior group much more than an eye's diameter apart. Posterior row of eyes with its hind margin straight, the median eyes small, much nearer to the laterals than to one another, their outer margins much further apart than those of the anterior median eyes; posterior lateral eyes large, their distance from the anterior margin of the carapace subequal to their distance from the posterior median eye of the other side.

Pedipalps spined as in *Gorgyrella namaquensis* (Trans. S. A. Phil. Soc., v. 11, p. 351).

Legs.—Tibia of *first leg* as long as the metatarsus and about $\frac{2}{3}$ of the tarsus. Tibia of *second leg* with only 3 external spines or spiniform setæ. Patella of *third leg* with about 4 stout spines overhanging the upper posterior part of the distal edge. All the *tarsi* spined below.

Total length 28 mm.; length of carapace 11; length of metatarsus of first leg $3\frac{3}{4}$.

5. ACANTHODON FRYI n. sp.

Type.—1 ♀ (No. 12756) found by Mr. Harold A. Fry at Johannesburg, Transvaal, between December, 1902, and March, 1903.

♀. *Colour*.—Carapace brown, paler mesially behind; chelicerae dark reddish; legs brown, the tibiæ, metatarsi, and tarsi of the 2 anterior pairs and the tibia and tarsus of the pedipalps darker; abdomen black, the under side paler.

Carapace as long as the patella, tibia, and $\frac{1}{2}$ the metatarsus of first leg, but slightly shorter than the tibia and metatarsus of fourth leg.

Ocular area wider than long, its width only very slightly less than the length of the metatarsus of first leg. Area formed by the frontal eyes and the anterior median eyes of the posterior group almost parallel-sided (only very slightly wider in front) and about twice as long as wide behind; the frontal eyes large, oval, nearly $\frac{1}{2}$ a long diameter apart and looking slightly upwards, the visual axes cutting

nearly at right angles, the common tubercle broadly grooved above. Posterior lateral eyes long, reniform, their anterior margins in a line with the posterior margins of the anterior median eyes and their posterior margins in a line with those of the posterior median eyes, their distance from the anterior margin of the carapace subequal to their distance from either median eye of the other side; the 4 median eyes forming a rectangle which is somewhat broader than long, the anterior medians small, much more than a diameter apart, the posterior medians ovate and a little shorter, their distance from the laterals about $\frac{1}{2}$ more than their distance from one another.

Legs.—Tibia of first leg as long as the metatarsus and $\frac{2}{3}$ of the tarsus. Tibia of second leg with about 5 external spines or spiniform setæ. Patella of third leg with 1-3 apical spines overhanging the upper posterior part of the distal edge and with a single spine nearer the middle of posterior upper surface (besides the anterior band). All the tarsi spined below.

Total length 35 mm. ; length of carapace 12 ; length of metatarsus of first leg 4.

GEN. GALEOSOMA n. g.

Upper part of abdomen with the cuticula very thick, hard and inflexible, forming a symmetrical oval piece of armour encasing the dorsal and upper part of the lateral surfaces and completely covering the spinners from above; under side of abdomen soft-skinned, provided with a large glabrous scar on each side at a little distance in front of the larger spinners. Labium transverse, strongly truncated. Other characters as in *Acanthodon*.

Type: *Galeosoma scutatatum* n. sp.

GALEOSOMA SCUTATUM n. sp.

Type.—1 ♀ (No. 9733) from Luipaards Vlei, Krugersdorp, Transvaal (October or November, 1901; *W. Watson*).

♀. *Colour* pale ochraceous, the carapace infuscated at the lateral margins of the thoracic portion, the cephalic portion also darkened laterally and at the fovea; chelicerae light brown; soft skin of abdomen pale yellowish, the hardened dorsal shield deep black to reddish black.

Carapace (measured across the edge of the ocular area) considerably shorter than the patella, tibia, and metatarsus of first leg.

Ocular area longer than wide, the area formed by the anterior median eyes of the posterior group and the frontal pair widest in front and $1\frac{3}{4}$ times as long as its width behind; frontal eyes large, much larger than the anterior median eyes. Posterior row with its posterior margin almost straight, the median eyes small, rotund, slightly further from the lateral eyes than from one another; the posterior lateral eyes large, strongly reniform.

Legs.—Tibia of first leg equal to the metatarsus and tarsus in length.

Abdomen.—Dorsal shield regularly oval (when seen from above), its length about $1\frac{1}{3}$ times its width and about $1\frac{2}{3}$ times the median length of the carapace; its lower edge convex in outline, when seen from the side, and quite entire behind and in front, the posterior margin thickened; surface of shield coarsely punctate, shiny, glabrous (except at the margin, which is hairy). Vertical anterior part of dorsal surface of abdomen not covered by the shield, the uncovered part slightly exceeding half the shield in length. Posterior scars on under side of abdomen obliquely transverse, broader towards the sides of the body and with the posterior margins sinuated in the middle.

Labium with two rows of teeth at apex (7, 2). *Coxæ of pedipalps* toothed over the greater part of the under surface, the teeth very minute posteriorly but larger at the anterior border, especially at each end of the segment.

Total length $16\frac{1}{2}$ mm.; length of carapace (measured across edge of ocular area) $5\frac{3}{4}$, width $5\frac{3}{4}$; length of abdominal shield $9\frac{1}{2}$, width 6.8.

GEN. PAROMOSTOLA n.g.

Intermediate between *Homostola* Sim., and *Hermachastes* Poc., agreeing with the former in having the fovea of the carapace strongly procurved, the chelicerae provided with two well-developed rows of teeth below (the outer row reaching nearly to the distal end of the groove and composed of 5 or 6 strong teeth), the inner (5-6) spines of the rastellum very stout, strong, and rather blunt, and the labium less than twice as wide as long and narrowed a little in front. Posterior sternal sagilla moderately large, about as large as in *Homostola* but much more lateral, their distance apart slightly exceeding twice their length and their distance from the lateral margin slightly less than their length. Inferior claw of tarsi well developed.

Type.—*Paromostola abernethyi* n. sp.

PAROMOSTOLA ABERNETHYI n. sp.

Type.—1 ♀ or juv. (No. 12704) from the Kentani District, Cape Colony, collected by Mr. H. P. Abernethy, and presented by the Rev. F. C. Kolbe.

Carapace as long as the tibia and $\frac{3}{4}$ of the metatarsus of fourth leg and subequal to the tibia, metatarsus, and tarsus of first leg; colour pale yellowish, the thoracic portion and the lateral borders and median band of the cephalic portion lightly infuscated. Ocular area considerably more than twice as wide as long.

Abdomen and spinners as in *Homostola zebрина* Purc.

Legs pale yellowish. *Tarsi* I and II scopulate to base. *Metatarsus* I scopulate in distal half; II with a few scopular hairs distally; I and II with 1-2 inner and 3 outer stout spines below. *Tibiæ* I and II with 2-3 long, slender outer spines below (none at apex). *Patella* III with an anterior row of 3 strong spines. *Claws* with 2-3 longish teeth at the base, those of the anterior legs also with 2-3 minute teeth at the middle, which are apparently absent in the outer claw of the posterior leg.

Labium with 9 teeth in 3 rows. *Coxæ of pedipalps* with many teeth at the base

Total length $13\frac{1}{2}$ mm.

GEN. HERMACHASTES Poc.

1. HERMACHASTES TRICALCARATUS n. sp.

Types.—4 ad. ♂♂ (No. 11724) from Steenberg's Cove, 1 ad. ♂ (No. 11996) from Stompneus, and 3 ad. ♂♂ (No. 11723) from Soldaten Post, all at St. Helena Bay, Malmesbury Division, collected by Mr. J. E. C. Goold in May, 1902.

♂♂. *Colour* pale ochraceous; carapace with faint greenish or fuscous patches radiating inwards from the margins, the cephalic portion ochraceous, with a dark stripe along middle and one at each lateral margin; abdomen with the median black or blackish brown stripe abbreviated posteriorly and widened anteriorly into a large patch and flanked on each side by a row of short, obliquely transverse, similarly coloured stripes, which do not unite with the median stripe; under surface of abdomen with a dark spot a little in front of the larger spinners, the sides with a larger spot just above these spinners but otherwise without spots or stripes; distal part of first leg reddish.

Labium with 0-4 minute teeth in front. *Coxæ of pedipalps* gene-

rally with a group of minute teeth (up to 20) at the base, rarely almost muticous.

Posterior spinners with the apical segment short and scarcely or slightly longer than $\frac{1}{2}$ the length of the penultimate segment (measured below).

Pedipalps.—Spine of palpal organ shorter than the bulb, curved and moderately slender (much slenderer than in *collinus* and nearly as in *lightfooti*).

Legs.—*Tarsi* muticous. *Metatarsus* I rather strongly curved; the under side strongly concave in the proximal half, straight in the distal half, with 2 (sometimes 1) inner and 3 (sometimes 2 or 4) outer spines; the inner surface besides with 2 (sometimes 3) large, very strong, curved spines near the middle, a smaller spine near the apex and 1–2 (rarely 0) mesial ones along the upper edge; the outer surface with 1–2 additional spines, and the dorsal surface often with a mesial spine. *Tibia* I stout, its length along upper side about $2\frac{1}{4}$ – $2\frac{1}{2}$ times its height at distal end, where it is considerably thickened below; the distal tubercle strong, bearing 2 very stout, more or less pointed spurs, of which the outer one is a little narrower and longer than the very broad inner one but much stouter than the outer apical spine of the under surface, the tubercle conically produced between the 2 spurs; proximal tubercle bearing a very stout pointed spur with distinct sigmoid curvature; tibia numerously spined and generally with a mesial and a basal spine along inferior inner edge. *Tarsi* I–III scopulate to the base, the scopulae divided by a narrow band of fine setae in I and II and by a band of longer setae in III; *metatarsus* I rather thinly scopulate in distal half only, II in distal three-fourths only, III without scopula or at most with a few distal scopular hairs.

Total length 11–14 mm.

2. HERMACHASTES GOOLDI n. sp.

Types.—3 ad. ♂♂ (No. 11706) from Stompneus, St. Helena Bay, Malmesbury Division, collected by Mr. J. E. C. Goold in May, 1902.

♂♂. Closely resembling the foregoing species but slightly smaller.

Colour.—Transverse stripes on abdomen meeting or nearly meeting in the median line above.

Legs.—*Metatarsus* of first leg with 1–2 inner and 3 outer spines below; its inner surface besides with 1, sometimes 2, large curved spines near the middle, a smaller spine near the apex, and generally

also a mesial one along the upper edge; the outer surface with 1-2 additional spines, and the dorsal surface generally with a mesial spine. *Tibia* of first leg slenderer than in the foregoing species and less thickened below distally, its length along dorsal side nearly three times its height at distal end; the distal tubercle bearing a broad, stout, pointed, external spur and, at its base, a longer stout spine which is only slightly or scarcely at all stouter than the apical outer spine of the under surface; proximal tubercle more distal than in the foregoing species, and bearing a stout spur with sigmoid curvature. *Metatarsus* of first leg scopulate in distal two-thirds, that of third leg with small distal patch of scopular hairs, sometimes extending over a third of the length of the segment.

Total length $10\frac{1}{2}$ - $11\frac{1}{2}$ mm.

3. HERMACHASTES SCHREINERI n. sp.

Specimens.—Over a hundred females and young (types; No. 11793, &c.) from Hanover, collected between September, 1901, and March, 1902, by Mr. S. C. Cronwright Schreiner, and also a few from the neighbouring farms Vlagkop and Poortjesfontein, 5-6 miles north of Hanover. No adult ♂ was found.

♀ ♀ (*Adult*). *Colour*.—Carapace pale yellowish or greenish yellow, weakly infuscated in places, particularly along the lateral margins of the cephalic portion; femora of legs pale greenish yellow, the remaining distal segments yellow, the patellæ and tibiæ often bright yellow; abdomen pale yellowish, the upper surface brownish black in anterior half, the posterior part strongly marked with the usual tree-pattern, the posterior bars not reaching the ventral surface in front of the spinners; ventral surface of body pale yellowish, the abdomen generally with a brownish black spot in front of each lateral spinner.

Carapace a little or considerably longer than the fourth metatarsus and tarsus, but subequal to or a little shorter than the first tibia and metatarsus.

Chelicerae with the inferior margin (measured along the groove) shorter than the sternum; rastellum strong.

Labium with 5-8 apical teeth in 1-2 rows. *Coxæ of pedipalps* with 16-30 basal teeth.

Legs.—*Tibia* I equal to the metatarsus in length. *Tarsi* not spined, the 2 anterior ones scopulate. *Metatarsi* I and II with 1-2 inner and 3 outer (the apical sometimes double) strong spines below, scopulate in distal part. *Tibiæ* I and II without apical spines,

but with 0-2 long setiform outer spines below; IV spined only below and on the inner surface above. *Claws* with 3-5 long teeth in the basal row furthest from the axis of the leg; the row nearest this axis composed of 5-6 teeth in the anterior legs, but absent or represented by 1-2 minute rudiments on the outer claw and by 1-3 minute teeth on the inner claw of the fourth leg.

Posterior spinners with the apical segment short and subhemispherical, only about $\frac{1}{2}-\frac{3}{4}$ as long as the penultimate segment.

Total length of a large ♀ 23½ mm.; length of carapace 7½, width 6; length of tibia of first leg 4.

Nests.—Mr. Schreiner, who dug up large numbers of the nests, sent me a couple with the surrounding earth, and the following description is taken from his notes* :—

The spider constructs its tubular hole in firm soil, avoiding loose sand and choosing sometimes bare ground and sometimes grass or the middle of a small bush. The hole is about 4-6 inches (10-15 cm.) deep, generally fairly straight and lined inside with web.† At the surface the hole is surmounted by a turret or tube composed of grass, small sticks, seeds, &c., bound together by webbing and projecting for a short distance (generally $\frac{1}{2}$ -1 inch) above the level of the surrounding ground. The top edge of the turret is irregular. Sometimes the hole has a forked entrance and sometimes a blind side chamber is present, but this is apparently exceptional. The hole is open at the top, although occasionally Mr. Schreiner observed a fine film of web stretched across the base of the turret.

I have subsequently observed similar nests at the Hot Baths, Montagu, made by the ♀ of *H. validus* Purc.

4. HERMACHASTES FLAVOPUNCTATUS n. sp.

Types.—2 ex. (No. 12695) from the Hogsback, Amatola Range, found in a rotten tree-trunk by Mr. F. A. Pym in 1902.

♀ ♀. *Colour* olivaceous, with ochraceous streaks; chelicerae nearly black; legs fusco-olivaceous, but the patellæ and the naked strips on the tibiæ and metatarsi ochraceous; abdomen deep purplish black, with numerous, conspicuous, roundish, pale yellow spots above and at the sides, but without trace of the tree-pattern;

* An account of these nests has already been published by Mr. Schreiner in a very interesting paper, entitled "Some Arachnids at Hanover, Cape Colony" (*Popular Science Monthly*, v. 62, p. 152, Dec., 1902).

† In the specimens sent me the hole is slightly inclined to the perpendicular.

under side of abdomen pale yellowish, mottled with black; sternum and coxæ pale to reddish ochraceous.

Carapace distinctly longer than the fourth metatarsus and tarsus, and as long as the tibia, metatarsus, and $\frac{2}{3}$ of the tarsus of first leg.

Chelicerae with the inferior margin (measured along the groove) considerably shorter than the sternum; rastellum well developed, composed of a row of stout spines extending over whole anterior margin, the outer spines acuminate at apex.

Labium with about 28–32 teeth in 3–4 rows occupying almost the entire anterior half. *Coxæ of pedipalps* with 38–52 teeth at base.

Posterior sternal sagilla larger than usual, their distance apart a little less or a little more than twice their own length.

Legs.—Tibia I very distinctly longer than the metatarsus. *Tarsi* not spined, the 2 anterior pairs scopulate. *Metatarsus* I with 0–1 inner apical and 3 outer spines, scopulate over $\frac{3}{4}$ of its length; II with 1–2 inner and 3 outer spines, scopulate in distal part only. *Tibiae* I and II unspined below or with 1–3 outer, often setiform spines (including sometimes an apical spine). *Claws* with 3–4 teeth in the basal row furthest from the axis of the leg in the anterior and 2–3 in the fourth pair of legs; the more distal row nearest the axis composed of 2–3 teeth in all the legs.

Posterior spinners with the apical segment conical, subequal to the penultimate in length.

Total length 17 mm.; length of carapace 6, width $4\frac{1}{2}$.

GEN. HERMACHA E. Sim.

1. HERMACHA BREVICAUDA n. sp.

Types.—2 ad. ♂♂ (Nos. 4453 and 8898) from the slopes on the outskirts of Capetown at the foot of Devils Mountain (July; *F. Treleaven* and *W. F. P.*).

♂♂. *Colour*.—Carapace dark mahogany brown, with pale silky hairs; chelicerae nearly black, with pale hairs and black bristles; legs ochraceous, except the femora and coxæ, which are pale olivaceous or yellowish olivaceous; abdomen pale yellowish below, the upper surface and sides black, speckled with numerous, small, pale yellowish, isolated or confluent spots, and with some larger yellow markings on dorsal surface, the black forming distinct or indistinct oblique lines behind on each side and a longitudinal median one.

Carapace as long as the metatarsus and $\frac{2}{3}$ of the tarsus of fourth leg and as the tibia and metatarsus of first leg, but much longer than the metatarsus and tarsus. Anterior row of eyes strongly procurved, the anterior margins of the median eyes (viewed from above) in a line with the centres of the large lateral eyes; posterior row slightly recurved, the median eyes subtriangular, longitudinal, smaller than the anterior medians and posterior laterals; the latter eyes elongate, as long as or longer than the anterior medians but much smaller than the anterior laterals and distant from these about $\frac{1}{2}$ – $\frac{3}{4}$ of their own length.

Labium muticous. *Coxa of pedipalps* with a large, numerously toothed area at base.

Posterior *spinners* short, much shorter than the sternum and about as long as the genital segment on under side of abdomen, the distal segment a little longer than the penultimate one (seen from below), these 2 segments together subequal to the stout basal segment; anterior spinners short, only about their own diameter apart.

Rastellum composed mostly of rather stout setiform spines.

Pedipalps much as in *H. lanata* Purc. (Trans. S. A. Phil. Soc., v. 11, p. 374); the process of the palpal organ reaching nearly or quite to the base of the tibia.

Legs much as in *lanata*, but some of the spines absent. *Metatarsus* I with 0–2 straight spines along middle of inner surface. *Tibia* I very robust, slightly longer than the metatarsus, furnished with 0–1 internal spine below and only 1–2 nearer the upper edge, the outer surface without any superior spines. *Metatarsus* I scopulate in the distal two-thirds, II scopulate to the base, these scopulae entire; III with thin scopula in distal third; IV with a few scopular hairs distally.

Total length $14\frac{1}{2}$ mm.; length of carapace $6\frac{1}{2}$; length of metatarsus of first leg 3.

2. HERMACHA EVANESCENS n. sp.

Specimens.—Over 40 females and young (types; No. 11833, &c.), from Hanover; also 14 from Vlagkop, 5–6 miles north of Hanover 1 from Eierfontein, 8–9 miles west of Hanover, and 9 from Poortjesfontein, 5–6 miles north of Hanover (the latter collected by Mr. T. Nesper).

♀ (Adult).—*Colour* of legs and carapace reddish yellow to greenish yellow, the carapace covered with fine yellow or olivaceous hairs; abdomen black above and on upper part of the sides, more or

less speckled, at least on the sides and posteriorly, with pale yellowish, so as to form the usual tree-pattern; under surface of abdomen and lower part of the sides pale yellowish and provided with a black spot on each side posteriorly; sternum and coxæ reddish yellow or the posterior coxæ pale ochraceous.

Carapace equal to or even considerably shorter than the fourth metatarsus and tarsus and as long as the tibia, metatarsus, and $\frac{1}{7}$ – $\frac{1}{8}$ of the tarsus of first leg. Fovea always distinctly procurved. Posterior lateral eyes equal to or smaller than the anterior laterals and almost touching or a little remote from them; posterior median eyes mostly small, subrotund and distant about $\frac{1}{2}$ their own diameter from the laterals or almost touching them.

Rastellum composed of stout setæ, intermingled with fine ones.

Labium with 0–2 apical teeth. *Coxæ of pedipalps* with a narrow strip of about 30–45 teeth at base.

Legs.—*Tibia* I subequal to or slightly longer than the metatarsus, with 1–3 apical and 0–2 other outer spines or spiniform setæ below and 0–1 at inner upper edge. *Metatarsus* I unspined or with 1–3 spines near base below (sometimes with an apical one as well); I and II densely and broadly scopulate to the base, III sparsely scopulate beyond the middle, IV with a few scopular hairs (sometimes almost absent) at apex. *Tarsi* I and II with dense undivided scopula, III with rather dense scopula, divided by a broad band of setæ, IV broadly setose below but scopulate on each side. Inferior claw of anterior legs rather small, hidden amongst the distal hairs.

Posterior spinners a little shorter or longer than the sternum but not exceeding the sternum and labium together; apical segment about $\frac{1}{4}$ – $\frac{1}{3}$ longer than the penultimate segment and a little shorter than the basal segment.

Total length 30 mm.; length of carapace $10\frac{1}{3}$, width 8; length of tibia of first leg $4\frac{2}{3}$.

Nests.—According to Mr. Schreiner* the nests consist merely of a deep web-lined hole, and are built in hard brack ground, which cakes like a brick when dry. The holes are fairly straight and vary like those of *Hermachastes schreineri* n. sp., but are deeper. They differ from those of the latter species, however, in never having a rim of sticks, &c., round the opening, which is flush with the surrounding surface.

* Mr. Schreiner has already published some of his observations on these nests in the *Popular Science Monthly*, v. 62, p. 153, December, 1902.

FAMILY BARYCHELIDÆ.

GEN. HARPACTIRELLA * Purc.

1. HARPACTIRELLA HELENÆ n. sp.

Specimens.—2 ad. ♂♂ (types; No. 11710) and many adult ♀♀ and young from Stompneus, St. Helena Bay, Malmesbury Division, collected by Mr. J. E. C. Goold in May and June, 1902. The adult ♂♂ were found in May.

♂♂. *Colour* as in *H. treleaveni* Purc. (Trans. S. A. Phil. Soc., v. 11, p. 341, 1902), except that the 2 spots between the posterior lung-books are absent; under side of sternum and coxæ pale ochraceous to greenish yellow.

Carapace as long as the metatarsus and $\frac{1}{3}$ of the tarsus of fourth leg and as the tibia and $\frac{2}{3}$ of the metatarsus of first leg.

Rastellum composed of fine setæ.

Legs.—Tibia of first leg 4 times as long as high in the middle, very distinctly longer than the metatarsus and also than the distance from the centre of the fovea to the anterior margin of the carapace; the metatarsus lightly but distinctly curved, its length almost equal to the distance from the fovea to the anterior margin of the ocular tubercle. Spines of legs as in *treleaveni*. First leg (including the coxa) much shorter than the fourth (by nearly the length of the fourth tarsus). Scopulæ as in *treleaveni*.

Pedipalps.—Palpal organ with the spine slender and terete, a little longer than the bulb, the distal part filiform and curving outwards.

Posterior spinners longish, the apical segment (seen from below)

* This genus was originally placed in the *Theraphosidæ* on account of the feebleness of the rastellum, which generally consists of rather slender setæ in the ♂, but of stiff and spiniform setæ and frequently also some slender spines in the ♀. It is closely related to *Brachionopus* Poc., from which it differs in the stronger development of the scopulæ of the 2 anterior pairs of legs. These scopulæ in the ♀ are dense and broad, extending at least half-way up the sides on the tarsus and distal half of the metatarsus, so as to be plainly visible from above. They are quite entire, and that on the metatarsus is quite as long as that on the tarsus. The scopula of the fourth tarsus is imperfectly or more or less distinctly divided along the middle by a row or narrow band of fine black setæ in some of the species (including the type), but in *domicola* n. sp. it is divided by a broader band; that of the third metatarsus may be finely divided or entire. The labium bears from 10 to over 30 apical granules in 2-4 rows, and the maxillæ have a large patch at the base. The sternum is oval, and $\frac{1}{5}$ - $\frac{1}{3}$ longer than broad. The claws of the legs are not toothed (in the first pair). The distance of the ocular tubercle from the anterior margin varies from $\frac{1}{5}$ to over $\frac{1}{3}$ of its length.

subequal to the penultimate segment and to the ocular tubercle in length.

Sternum as in *treleaveni*.

♀ ♀. Closely resembling *treleaveni* in most respects, except that the ocular tubercle is slightly further back, being about $\frac{1}{3}$ of its length from the anterior margin of carapace. Carapace subequal to or a little shorter than the metatarsus and tarsus of fourth leg and equal to the tibia, metatarsus, and $\frac{1}{2}$ – $\frac{3}{4}$ of the tarsus of first leg. Tibia of first leg relatively longer than in *treleaveni*, its length about $2\frac{3}{4}$ times its height in the middle. First leg (including coxa) much shorter than the fourth (by almost the whole length or by more than the length of the tarsus of the latter).

The carapace has more yellowish hairs, which frequently form radiating stripes, while the younger individuals are as a rule much darker than those of *treleaveni*.

Total length ♂ ♂ 14–17, large ♀ 22 mm.

2. HARPACTIRELLA MAGNA n. sp.

Type.—1 ♀ (No. 5248) from Dunbrody, on the Sundays River, Uitenhage Division (*Rev. J. A. O'Neil*, 1899).

Closely allied to *H. lightfooti* Purc.

♀. *Colour* of carapace and limbs brownish yellow, the 3 distal segments of the legs more yellowish; hairs on carapace pale yellowish, intermingled with very few black ones; those on the limbs greyish yellow; abdomen pale yellowish, the dorsal surface and upper part of the sides strongly marked with black reticulations and provided with the usual tree-pattern posteriorly, the hairs on the paler parts pale golden yellow; ventral surface without conspicuous spots; sternum brown.

Carapace subequal to the metatarsus and tarsus of fourth leg, and only slightly longer than the tibia and metatarsus of first leg. Ocular tubercle about $\frac{1}{3}$ of its length from anterior margin.

Rastellum composed of setæ, but with some stout truncated spines (broken setæ?) at inner part.

Legs.—Tibia of first leg slightly less than 3 times as long as high in the middle, its length slightly exceeding that of the metatarsus and considerably less than the distance from the fovea to the hind margin of the ocular tubercle. First leg (including coxa) shorter than the fourth leg (by $\frac{1}{2}$ the fourth metatarsus). Legs spined much as in *treleaveni*. Scopulæ of fourth tarsus and third metatarsus practically entire.

Labium with over 30 teeth in 3-4 rows.

Apical segment of *spinners* long and terete, about $\frac{1}{2}$ longer than the ocular tubercle and $\frac{1}{2}-\frac{3}{4}$ longer than the penultimate segment.

Total length 35 mm.; length of carapace $9\frac{3}{4}$, width $7\frac{1}{2}$; length of first leg $29\frac{1}{2}$.

3. HARPACTIRELLA DOMICOLA n. sp.

Specimens.—(a) 1 ♀ (type; No. 8897) found on Bonnie Vale Farm at Bushmans Drift, on the Breede River, Swellendam Division (near Ashton), by Mr. Charles Groom, in 1901.

♀. *Colour* of carapace brown, the limbs more yellowish, the hairs on the former mostly black but the longer ones pallid and radiate; abdomen pale fulvous, with the usual black reticulations and pattern above, the ventral surface with faint median black line and with a black spot on inner side of each posterior lung-book.

Carapace a little longer than the metatarsus and tarsus of fourth leg, and as long as the tibia, metatarsus, and $\frac{2}{3}$ of the tarsus of first leg. Ocular tubercle distant at least $\frac{1}{3}$ of its length from the anterior margin; the posterior median eyes much smaller than the anterior medians or posterior laterals.

Rastellum feeble, composed of long setæ.

Legs.—Tibia of first leg about $2\frac{1}{2}$ times as long as high, its length a little exceeding that of the metatarsus and considerably less than the distance from the fovea to the hind margin of the ocular tubercle. First leg much shorter than the fourth (by the length of the fourth tarsus). Scopula of third metatarsus practically entire; that of fourth tarsus very conspicuously divided (except perhaps quite distally) by a thick band of long black setæ. Spines as in *treleaveni*, except on metatarsus II, which has an inferior apical spine.

Labium with 12 apical teeth in 2 rows.

Apical segment of *spinners* conical, subequal to the penultimate segment in length but slightly shorter than the ocular tubercle.

Total length 25 mm.; length of carapace 9, width $6\frac{3}{4}$; length of first leg 25.

(b) 1 ♀ (No. 12393) found in a trap-door nest at Ashton by myself in November, 1902. This specimen has all the metatarsi spined at the apex, but the under surface of the abdomen is without black markings.

Nest a cylindrical tube, 17-18 cm. (7 inches) deep, widening slightly towards the opening but not funnel-shaped, strongly inclined and descending towards the hinge-side at an angle of nearly 45° , much as in *Gorgyrella* (Ann. S. A. Mus., v. 3, pl. 1, fig. 3). Lid

flat, oval in outline, but broadly truncated at the hinge, its diameter taken at right angles to the hinge equal to the diameter taken parallel to the hinge (each being 19 mm.).

The under side of the lid is lined with white silk, but the upper surface is rough and covered with clay. At the edge the lid broadly overlaps the edge of the hole. Width of hinge about 13 mm.; diameter of hole at 1 cm. from opening 13 mm.; width of hole at opening 15 mm.; width of carapace of occupant $5\frac{1}{2}$ mm.

Synoptic Table of the Adult Females of HARPACTIRELLA.

- a. Apical segment of spinners (measured below) $\frac{3}{2}$ – $\frac{3}{4}$ longer than the penultimate segment, and longer than the ocular tubercle.
- a¹. Colour brownish yellow. First leg decidedly shorter than the fourth (by $\frac{1}{2}$ the fourth tarsus). Uitenhage Division *H. magna* n. sp.
- b¹. Colour blackish brown. First leg subequal to the fourth or only slightly shorter (by at most $\frac{1}{5}$ of the fourth tarsus). Paarl Division
H. lightfooti * Purc.
- b. Apical segment of spinners subequal to the penultimate segment in length, and shorter than, or at most only slightly longer than, the ocular tubercle.
- a². Scopula of fourth tarsus divided along the middle by a very conspicuous and rather thick band of longish black setæ. Metatarsus II spined at apex. Posterior median eyes very small, much smaller than the laterals or the anterior medians. Robertson and Swellendam Divisions
H. domicola n. sp.
- b². Scopula of fourth tarsus entire or divided by a fine band or row of slender setæ. Metatarsus II not spined. Posterior median eyes generally only slightly smaller than the anterior medians.
- a³. Carapace as long as the tibia and metatarsus of first leg. Scopula of fourth tarsus undivided. Prince Albert *H. karrooica* Purc.
- b³. Carapace as long as tibia, metatarsus, and $\frac{2}{3}$ – $\frac{3}{4}$ of the tarsus of first leg. Scopula of fourth tarsus imperfectly or more or less distinctly divided by a line of fine setæ.
- a⁴. Ocular tubercle further forward, about $\frac{1}{3}$ of its length from the anterior margin. First leg shorter than the fourth by $\frac{1}{2}$ – $\frac{2}{3}$ of the fourth tarsus. Cape Peninsula *H. treleaveni* Purc.
- b⁴. Ocular tubercle further back, about $\frac{1}{3}$ of its length from the anterior margin. First leg shorter than the fourth by almost the whole length or more than the length of the fourth tarsus. Malmesbury Division *H. helene* n. sp.

* *H. lightfooti* may possibly be the ♀ of *longipes* Purc., to which it is closely related. The female specimens doubtfully referred to *longipes* in a previous paper (Trans. S. A. Phil. Soc., v. 11, p. 344) do not really belong to that species.

GEN. BRACHIONOPUS Poc.

1. BRACHIONOPUS ANNULATUS n. sp.

Type.—1 ex. (No. 12752) from Kentani, Transkei (*Miss A. Pegler*).

Colour brown, the legs lightly infuscated; hairs on carapace mostly greenish black, tipped with orange; abdomen covered with orange-tipped hairs intermingled with black ones, the latter forming the usual pattern of stripes above, the under side spotted with black and with a median black line; legs yellowish red at the apex and base of the joints; sternum reddish yellow, with faint median darker stripe.

Carapace as long as the patella, tibia, and slightly over $\frac{1}{2}$ the metatarsus of first leg, but shorter than the fourth tibia and metatarsus. Eyes much as in *B. robustus* Poc.

Legs.—*Tarsi* all with the scopula distinctly divided by a band of black setæ. *Metatarsi* I and II with the scopula confined (except at the tip) to the under side of the segment, and provided with 3–4 black setæ along the middle but not distinctly divided, the length of the scopula very much less than that of the tarsus; III and IV with a row or band of setæ along the middle; I and II with a single spine at apex; III and IV with several apical, besides some other spines. *Tibiæ* I and II sometimes with an apical spine.

Labium with a single apical tooth. *Coxæ of pedipalps* with a small basal patch of 7–17 teeth.

Spinners very short, the 2 apical segments subequal in length and together equalling the basal segment.

Total length $13\frac{1}{2}$ mm.

2. BRACHIONOPUS TRISTIS n. sp.

Type.—1 ex. (No. 4197) from Barberton, Transvaal (*J. P. Cregoe*, December, 1897).

♀ or *juv.* *Colour* brown; hairs on carapace pale yellowish, mostly darkened at base; abdomen covered with yellowish hairs mingled with brown ones, the under side pale yellowish, with stripes of dark brown hairs; sternum reddish yellow, with faint median infuscate stripe; legs nearly concolorous.

Carapace as long as the patella, tibia, and $\frac{2}{3}$ of the metatarsus of first leg.

Legs, spinners, and eyes much as in the previous species.

Labium with 8 apical teeth. *Coxæ of pedipalps* with about 26–28 teeth at base.

Total length $13\frac{1}{2}$ mm.

FAMILY DIPLURIDÆ.

GEN. THELECHORIS Karsch.

THELECHORIS AUSTRALIS n. sp.

Type.—1 ♀ (No. 8899) from Dunbrody, on the Sundays River, Uitenhage Division (*Rev. J. A. O'Neil*).

♀. *Colour* yellowish brown; carapace with appressed, pale yellowish, silky hairs, and narrow radiating dark stripes, the lateral and anterior margins also narrowly infuscated, the ocular tubercle black; chelicerae, the tibia and tarsus of pedipalp and the tibia and metatarsus of first leg dark reddish brown; labium and coxæ of pedipalps broadly white along anterior margin; abdomen densely covered with dark olive-brown hairs; posterior spinners black-ringed at apex of basal and mesial segments; the anterior spinners pale yellowish.

Carapace slightly longer than the tibia, metatarsus, and $\frac{1}{2}$ the tarsus of first leg, and as long as the metatarsus and $\frac{2}{3}$ of the tarsus of fourth leg. Ocular area about twice as wide as long. Anterior row of eyes (viewed from above) distinctly procurved, the lateral eyes large, oval; posterior row straight, the median eyes subtriangular, longitudinal, about as long as the anterior medians and very close to the posterior laterals; the latter eyes oblong, much larger than the medians, but considerably smaller than the anterior laterals and very close to these.

Chelicerae with a single row of teeth below. *Labium* muticous.

Legs IV, III, I, II. Metatarsus I considerably longer than the tibia. All the tarsi, metatarsi, and tibiæ spined.

Median length of *sternum* slightly exceeding its width.

Posterior *spinners* about 3 times the median length of sternum, the 2 basal segments subequal in length (measured below), the distal segment long, flexible, subannulated at least near apex, its length slightly less than that of the 2 basal segments together, but almost $1\frac{1}{2}$ times the median length of the sternum.

Total length 16 mm.; length of carapace 6, width 5; length of metatarsus of first leg $2\frac{3}{4}$; length of spinners $9\frac{1}{4}$.

GEN. EVAGRUS Auss.

EVAGRUS ATROPURPUREUS n. sp.

Type.—1 ex. (♀ or young; No. 3906) found by me under a stone at the village of Prince Albert in September, 1896.

Colour brownish ochraceous to pale ochraceous; carapace with short, radiating, infuscate stripes and infuscate lateral borders; chelicerae brownish; femora of legs more or less infuscated, striped longitudinally with pale ochraceous, the inner and under surfaces of the 2 anterior pairs pale yellowish, distal segments of first 2 pairs also more or less browned; coxæ, sternum, &c., pale ochraceous; abdomen dark purplish, the under side along the middle, the lung-opercula and the anterior spinners pale yellowish; posterior spinners darkened, the apical segment paler, white distally, the 2 basal segments black-ringed at the apex, the mesial segment and the distal half of the basal segment thickly spotted with white on ventral surface.

Carapace oval, considerably longer than wide. Posterior row of eyes with the hind margin in a slightly procurved line (viewed from above), the lateral eyes large, much larger than the medians and more than their own length distant from the anterior margin of carapace; posterior row straight, the median eyes somewhat oval, slightly larger than the anterior medians and very close to the posterior lateral eyes; the latter as large as the anterior laterals and almost touching them.

Legs I and II with the femora, patellæ, and tibiæ very stout, compressed. Tarsi with 1-2 spines below but not scopulate. Metatarsus I with 2 rows of 3 stout spines each below and another row of 3 spines along inner surface. Tibia I with 3 apical inferior spines, one outer inferior spine near middle, and 2 inner dorsal spines. Patella I not spined.

Sternum longish oval. *Labium* considerably wider than long, mucous like the coxæ of pedipalps.

Posterior spinners stout and short, half as long as the abdomen and about equal to the sternum and half the labium; the basal segment longest, the distal segment subequal to the mesial segment and slenderer.

Total length 8 mm.; length of carapace $3\frac{1}{2}$, width $2\frac{1}{3}$; length of metatarsus of first leg 1; length of posterior spinners 2.

FAMILY LYCOSIDÆ.

Up to the present some 32 species of *Lycosidæ* have been described or recorded from South Africa, but some of these are certainly synonyms and others possibly wrongly identified. The number of good species are represented approximately as follows: *Anomalomma*

(2 spp.), *Artoria* (1 sp.), *Eriippa* (1 sp.), *Lycosa* (15 spp.), *Ocyale* (2 spp.), *Pardosa* (2 spp.), *Zenonina* (1 sp.), and 2 spp. of *Lycosa* which I now place in a new genus (*Pterartoria*), making a total of 26 species. To these I now add 33 new species and 1 new variety, viz., *Anomalomma* (2 n. spp.), *Artoria* (1 n. sp.), *Lycosa* (12 n. spp.), *Pardosa* (7 n. spp. and 1 n. var.), *Trabæa* (4 n. spp.), and the 2 new genera, *Proerippa* (1 n. sp.) and *Pterartoria* (6 n. spp.).

Key to the South African Genera.

- a. Body and legs with plumose hairs * (without scales).
- a¹. Carapace elongate. Chelicerae with 2 inferior teeth. Tarsi not scopulate.
- a². Cephalic region distinctly elevated *Proerippa* n. g.
- a². Cephalic region not elevated *Anomalomma* E. Sim.
- b¹. Carapace normal. Chelicerae with 3 inferior teeth. Anterior tarsi scopulate laterally *Pterartoria* n. g.
- b. Body and legs with finely ciliated hairs or with scales, but no plumose hairs.
- a³. Labium reaching up to or beyond middle of maxillae.
- a⁴. Third leg longer than the first. Anterior row of eyes recurved
Ocyale Aud.
- b⁴. Third leg shorter than the first.
- a⁵. Sides of head sloping *Lycosa* Latr.
- b⁵. Sides of head vertical, at least in the lower part. Anterior row of eyes strongly procurved.
- a⁶. Anterior median eyes about as far from the anterior laterals as from one another *Artoria* Thor.
- b⁶. Anterior median eyes much further from the anterior laterals than from one another *Trabæa* E. Sim.
- b³. Labium short, not reaching to the middle of the maxillae. Sides of head vertical, at least in lower part.
- a⁷. Cephalic region not elevated. Body covered with hairs
Pardosa C. Koch.
- b⁷. Cephalic region distinctly elevated. Body covered with scales.
- a⁸. Abdomen oblong. Chelicerae with 2 inferior teeth . . *Eriippa* E. Sim.
- b⁸. Abdomen amplified and truncated behind. Chelicerae with 3 inferior teeth *Zenonina* E. Sim.

* These hairs are most easily detected by examining the metatarsus of a leg under a cover-glass with a compound microscope.

GEN. ANOMALOMMA E. Sim.

1. ANOMALOMMA SCHREINERI n. sp.

Specimens.—(a) 31 ♀ ♀ and 3 ♂ ♂ (types; Nos. 9431, 11755, 11785, &c.) from Hanover, and several specimens from Vlagkop, 5–6 miles north of Hanover, collected by Mr. S. C. Cronwright Schreiner.

♀ ♀. *Carapace* more or less infuscated laterally and clothed with black hairs, the broad yellowish median band clothed with yellow hairs; submarginal stripes indicated by a few yellowish spots or almost absent; no marginal band of white hairs present. Anterior median *eyes* generally with their lower edges slightly lower than the line joining the upper edges of the anterior lateral eyes, the latter eyes a little nearer to the edge of the carapace than to the eyes of the second row; posterior quadrangle a little more transverse than in *A. albiventre* E. Sim., the eyes of the second row also relatively larger, considerably larger than the posterior eyes.

Abdomen coloured much as in *albiventre* and clothed with similar plumose hairs; the dorsal surface fulvous yellow, with a median yellow or testaceous stripe bordered by black anteriorly, and marked with a number of transverse, triangular, black marks and lines more posteriorly; the sides fulvous yellow, with black spots or more or less entirely blackened; the ventral surface pale yellowish, rarely with a few dark spots towards the sides. *Vulva* (pl. viii., fig. 1) with well-developed, prominent, median lobe, whose hind margin is truncated or slightly sinuated; the lateral lobes of hind margin generally depressed, appearing about as long as the median lobe when viewed from below, but converging towards one another dorsally to the median lobe when seen from behind, the median angles of the lateral lobes not produced backwards.

Legs pale yellowish, strongly banded and spotted with black, the distal segments often brownish; tarsi without scopula; basal spines on first tibia reaching only just beyond the base of the mesial spines.

Sternum pale yellowish, or faintly infuscated towards the sides.

Chelicerae with 2 inferior teeth.

Inferior *spinners* close together, the superior spinners with inconspicuous apical segment.

♂ ♂. Differs from ♂ of *albiventre* principally in having the dorsal eye-area wider behind and less quadrate. *Carapace* clothed with white hairs on median band. *Abdomen* as in ♀, but the posterior yellow area above the spinners furnished with some white

hairs. Tibia, metatarsus, and tarsus of first *leg* clothed with white hairs, the patella also with white hairs at base on each side. *Pedipalps* pale yellowish, the patella and tibia subequal, together longer than the tarsus; the latter with a longitudinal narrow distal strip of scopula above; the bulb not large.

Length ♀ ♀ $5\frac{1}{3}$ –8, ♂ $5\frac{1}{2}$ mm.

(b) 1 ♀ from Prince Albert (*W. F. P.*). Carapace uniformly darkened, without bands; abdomen also uniformly darkened above and on the upper part of the sides, with 2 rows of yellowish dots above; legs weakly banded on the femora; median lobe of vulva slightly wider than in the typical form.

(c) 1 ♀ from Ceres (*H. Hermann*). Median lobe of vulva wider than in the typical form; basal spines on first tibia longer, reaching to middle of the mesial spines; sternum black.

(d) 1 ♀ from Signal Hill, Capetown (*R. M. Lightfoot*). Vulva, tibial spines, and sternum as in ♀ from Ceres. Abdomen uniformly covered with testaceous yellow hairs intermingled with long black setæ above, the posterior part with a few small spots of white hairs.

2. ANOMALOMMA BISINUATA n. sp.

Specimens.—(a) 1 ♀ and 1 ♂ (No. 12747) from Dunbrody, on the Sundays River, Uitenhage Division (*Rev. J. A. O'Neil*).

♀ (*Type*). Carapace infuscated laterally, without marginal bands of white hairs, the median pale yellowish band narrow posteriorly and clothed with white hairs. Anterior lateral *eyes* slightly nearer to the anterior margin than to the eyes of the second row, which are rather large.

Abdomen pale fulvous yellow, speckled with black but without conspicuous dorsal pattern, clothed with yellow plumose hairs above; ventral surface pale yellowish, without spots. *Vulva* (pl. viii., fig. 2) a simple plate with bisinuate hind margin.

Sternum pale yellowish, faintly infuscated.

Legs pale ochraceous, banded, without scopulæ.

Chelicera with 2 inferior teeth.

♂. Darker. Carapace with coppery hairs in median band. *Abdomen* black, the dorsal surface with large yellowish patch clothed with coppery hairs anteriorly and with a double series of yellowish spots as well as a number of coppery hairs posteriorly and a few white hairs above the spinners. Anterior *legs* partly infuscated; first leg clothed with white hairs on the tarsus and metatarsus (except at the base and apex of each segment), with a broad band of

white hairs near the middle of the tibia (but remote from the apex of the segment), and also with some white hairs on the base of the patella and femur. *Pedipalps* as in *schreineri* n. sp.

Length ♀ $6\frac{1}{2}$, ♂ $4\frac{1}{2}$ mm.

(b) 1 ♀ from Hermanuspietersfontein, Caledon Division (*R. M. Lightfoot*). Anterior lateral eyes midway between the anterior margin of carapace and the eyes of the second row.

GEN. PROEVIPPA n. g.

Very like the South African species of *Anomalomma*, but with the carapace still narrower and longer and the cephalic region distinctly elevated. Superior spinners much as in *Anomalomma albiventre*, &c., the distal segment being mostly inconspicuous. Legs robust, excepting the slender metatarsi and tarsi, and without any scopulæ; the claws with about 7 teeth. Labium scarcely or not reaching to the middle of the maxillæ. Chelicerae long. Abdomen clothed with plumose hairs (also present on the legs). Palpal organ of ♂ resembling that of *A. albiventre*.

PROEVIPPA LIGHTFOOTI n. sp.

Specimens.—(a) 3 ♂ ♂ (types; No. 9315) from the top of the Muizenberg Range, 1 ♂ from the flats at Bergvliet, Constantia Area, and 1 ♀ from the flats at Retreat, all these localities in the Cape Peninsula.

♂ ♂. *Carapace* reddish yellow, infuscated anteriorly on the head and towards the sides, thickly covered with white appressed hairs; the cephalic portion with black bristles in front and marked at posterior margin with a pair of black spots bearing black hairs. Dorsal eye-area slightly wider behind, its lateral length also a little less than the anterior width, and the posterior eyes only a little smaller than those of the second row, the distance between these latter eyes from $1\frac{1}{2}$ to nearly twice their own diameter; anterior median eyes slightly larger than the laterals and nearer to these than to one another, their lower margins slightly below the level of the upper edges of the lateral eyes.

Abdomen very pale yellowish, the upper surface sometimes fulvous yellow, provided anteriorly with a median, testaceous, fusiform stripe extending to the middle and bordered on each side by a black line or series of black spots; middle and posterior part of abdomen with several transverse bands and rings of black; sides marked with

a few black spots, their anterior part broadly blackened; ventral surface blackened, the postgenital region often only partially so; whole abdomen covered with white hairs, but the dorsal surface with 3-4 small patches of black hairs on each side.

Sternum black. *Chelicerae* with 2 inferior teeth.

Legs.—Three posterior pairs pale yellowish, clothed with white hairs, and banded and marked with black except on the tarsi; *first pair of legs* with the femur, patella, and tibia very robust, the femur pale yellowish above but blackened below and distally (except on the inner side), the blackened parts clothed with black hairs and the yellowish parts with white hairs; patella and tibia brownish yellow, thickly covered with black hairs, the hairs on the under side long, forming a thick mane, the patella with a patch of white hairs on inner side, the tibia with 4 long inner and 3 long outer inferior spines, the distal pair being inserted some little distance from the apex; metatarsus and tarsus of first leg slender, pale yellowish and clothed with white hairs, the metatarsus with a brown spot clothed with black hairs at base above, its under surface with 1 short (apical) and 2 long spines on each side. *Claws* of legs black.

Pedipalps brownish yellow; the tibia longish, longer than the patella; tarsus moderate, much shorter than the tibia and patella and provided with a distal strip of scopula along the middle above.

♀. Like the ♂, but with the front *legs* normal and resembling the others; the tibia spined as in the ♂. *Vulva* (pl. viii., fig. 3) a rounded plate, with truncated, deeply excavated and emarginated hind margin.

Length ♂ ♂ $4\frac{1}{2}$ -6, ♀ 5 mm.

(b) 1 ♂ from the Waterfall Mountains, Tulbagh Division (*R. M. Lightfoot*).

(c) 1 ♀ from Hermanuspietersfontein, Caledon Division (*R. M. Lightfoot*).

GEN. PTERARTORIA n. g.

Carapace mostly very like that of *Pardosa*, the sides of the head being generally vertical in the lower and sloping in the upper part in the ♀, but almost entirely vertical in the ♂; sometimes, however, with much more sloping sides, as in *Lycosa*. Dorsal eye-area sub-square or narrowed in front; anterior row of eyes procurved and narrower than or as wide as the second row, the lateral eyes about midway between the eyes of the second row and the anterior margin of carapace. Apical segment of superior spinners small. Labium reaching at least to middle of maxillæ. *Chelicerae* with 3 inferior

teeth, the distal tooth often smaller. Anterior tarsi scopulate at the sides; fourth metatarsus frequently equalling the tibia and patella in the ♂, but shorter than these segments in the ♀; anterior tibia generally with 3 inner and 2 outer, longish, inferior spines, in addition to a short apical pair; superior claws of hind legs with 6-8 teeth, the inferior claw not toothed. Body clothed with appressed plumose hairs, as well as with ordinary ciliated hairs.

Type: *P. subcrucifera* n. sp.

The two species described under the names *Lycosa lativittata* and *arbuscula* Purc. (Ann. S. A. Mus., v. 3, p. 38, 1903) also fall into this genus.

1. PTERARTORIA SUBCRUCIFERA n. sp.

Specimens.—(a) 12 ♀ ♀ and 10 ♂ ♂ (types; No. 9264, &c.) from the Cape Peninsula (Lions Rump, slopes of Devils Peak and Table Mountain, Camps Bay and Sea Point).

♀ ♀. *Carapace* longer than the fourth metatarsus and subequal to the tibia and metatarsus of first leg, covered with pallid hairs; colour dark brown or nearly black, the submarginal, yellow lateral bands imperfect; cephalic portion of median band amplified, rotund and generally provided with a pair of dark marks, the thoracic portion nearly parallel-sided or more or less widened or even subrotund in the anterior part. Dorsal eye-area as long as wide in front, subquadrate. Eyes of the second row relatively small and much more than their own diameter apart, the second row wider than the first by nearly $\frac{1}{2}$ an eye's diameter on each side. Anterior row of eyes considerably procurved, the eyes small and equal.

Abdomen.—Dorsal surface with a yellow band (or series of spots) on each side, the bands converging and often uniting behind and in front, enclosing a large, mostly dark brown area, which is provided in front with a narrow median yellow line and is frequently transversely dilated in places, particularly in the middle, somewhat in the form of a cross; * sides of abdomen black, mottled with yellow; under surface more or less pale yellowish, often with a dark median stripe. *Vulva* (pl. viii., fig. 4) somewhat transverse, the greater part occupied by a large 4-sided fovea, which is open along the straight posterior margin; the raised border enclosing the fovea emarginate in the middle and furnished with a dark spot on each side near hind end.

Legs pale yellowish, strongly banded with black, especially on the

* In some specimens the abdomen is provided with a couple of large white median patches posteriorly, placed one behind the other.

femora; tarsi and metatarsi of 2 anterior pairs scopulate at the sides.

Sternum blackened. *Chelicerae* with the distal inferior tooth generally smaller.

♂ ♂. *Abdomen* very differently marked, the dorsal surface black towards the sides and provided with a median, yellow or brownish red band which is very broad in the anterior half but much narrower (rarely absent) in the posterior half of abdomen, the anterior portion of the band furnished with a median stripe of white hairs, the stripe often bordered on each side by a black line; under surface often blackened. *Carapace* with the sides of the head steep. Fourth *metatarsus* as long as the tibia and patella.

Length ♂ ♂ $4\frac{3}{4}$ – $6\frac{1}{2}$, ♀ ♀ 7– $8\frac{1}{2}$ mm.

(b) 1 ♂ and 1 ♀ (No. 3285) from Ceres (*W. F. P.*).

(c) 1 ♂ (No. 12369) from the banks of the Breede River at Darling Bridge, Worcester Division (*H. Hermann*).

(d) 8 ♂ ♂ and 3 ♀ ♀ (No. 7828) from Brandvlei, Worcester Division (*I. Meiring, W. F. P.*).

2. PTERARTORIA CALDARIA n. sp.

Type.—1 ♀ (No. 12649) from the Hot Baths near Montagu (November, 1902, *W. F. P.*).

♀. *Carapace* subequal to the first tibia and metatarsus but a little longer than the fourth metatarsus; colour brown, the submarginal stripes formed of a row of yellow spots on each side; the median yellow band broad, the cephalic portion broadly oval, constricted behind, the thoracic portion widened and oval anteriorly. Anterior row of eyes considerably procurved, a little narrower than the second row, the eyes subequal; eyes of the second row moderately large, scarcely more than their own diameter apart; dorsal eye-area a little shorter than wide in front, subquadrate.

Abdomen reddish brown above, with yellowish plumose hairs; the narrow median yellow stripe on anterior half dilated transversely in front; posterior part of abdomen with a series of transverse black lines down middle; ventral surface pale yellowish.

Vulva (pl. viii., fig. 5) related to that of the previous form but more complicated, the median emargination of the border deeper and preceded by an additional transverse edge; a transverse black line present on each side posteriorly.

Sternum black, with large yellow patch.

Chelicerae yellow at base, black distally, the distal inferior tooth smaller.

Legs pale yellow, spotted and banded with black, especially on the femora; anterior tarsi and metatarsi scopulate at the sides.

Total length 7 mm.

3. PTERARTORIA SAGÆ n. sp.

Type.—1 ♀ (No. 4170) from the Hex River Valley, Worcester Division (*F. Treleaven*).

Closely allied to *caldaria* n. sp.

♀. *Carapace* subequal to the fourth metatarsus and to the first tibia and metatarsus in length; colour dark brown, the submarginal yellow stripes interrupted, the cephalic portion of the median band enlarged and provided with a pair of dark stripes, the thoracic portion of this band a little narrower anteriorly, much narrower posteriorly. Anterior row of eyes strongly procurved, the eyes subequal; second row wider than the anterior row by about $\frac{1}{2}$ an eye's diameter on each side, the eyes of moderate size, their distance apart considerably exceeding their diameter; dorsal eye-area almost forming a square, being only slightly wider behind than in front.

Skin of *abdomen* reddish brown above and at the sides (the hair covering mostly rubbed off), with some black spots; dorsal surface with a narrow, median, black-bordered, yellow stripe in anterior half and with a yellow spot on each side at anterior end; under side pale yellowish. *Vulva* (pl. viii., fig. 6) longer than wide, consisting of a horseshoe-shaped marginal portion enclosing a depression in which lie a pair of deeper cavities; on each side near posterior end of the plate is a black spot.

Sternum yellowish, infuscated. *Chelicerae* yellowish brown, with oblique infuscate band in front, the 3 inferior teeth equal.

Legs yellowish, banded; scopulae feeble but present on the sides in the two anterior pairs of legs.

Total length 7 mm.

4. PTERARTORIA FLAVOLIMBATA n. sp.

Specimens.—1 ♀ (No. 12203) from Hout Bay (November, 1901, *W. F. P.*) and 1 ♂ (No. 9140) from the Cape Flats near Princess Vlei (May, 1901, *W. F. P.*), both localities in the Cape Peninsula.

♀ (*Type*). *Carapace* a little longer than the fourth metatarsus but subequal to the first tibia and metatarsus; lateral margins broadly yellow, the median, reddish yellow band broad, its cephalic portion a little dilated on each side, its thoracic portion only slightly dilated anteriorly, broad throughout. Anterior row of eyes moder-

ately procurved, narrower than the second row, the median eyes slightly larger; the eyes of the second row rather large, scarcely more than an eye's diameter apart; dorsal eye-area subquadrate, its width in front only slightly exceeding the length of the sides.

Abdomen reddish brown or fulvous, mingled with black above and on the sides, with a narrow, median yellow stripe in anterior half and a large white median band with angular lateral edges in posterior half; ventral surface pale yellowish. *Vulva* (pl. viii., fig. 7) broadly transverse, consisting of a median bar, which is dilated posteriorly and terminates free anteriorly, and of a pair of curved lateral elevations, each containing a black spot; in the angle between the median bar and the lateral pieces is a smaller convexity.

Sternum yellow in the middle, black laterally.

Chelicerae with basal yellow patch; the proximal inferior tooth strongest.

Three anterior pairs of *legs* pale yellowish, strongly banded and marked with black, except on the tarsi; black bands on fourth leg mainly present on the femur, the more distal segments faintly banded with reddish yellow; coxæ also spotted with black; tarsi and anterior metatarsi scopulate laterally.

♂. Dorsal *eye-area* nearly quadrate.

Abdomen brown laterally, with a broad yellow median band above becoming narrower posteriorly and reaching hind end, the anterior part of this band with a narrow median strip of white hairs bordered by dark brown laterally.

Legs long, pale yellowish, not banded, the anterior femora infusate at the base; fourth metatarsus equal to the tibia and patella.

Pedipalps pale yellowish, the femur blackened below, the patella and tibia subequal and together a little shorter than the tarsus; the bulb (pl. viii., fig. 8) very large, provided with a strong blunt spiniform process in the middle below.

Total length ♀ 8, ♂ 4½ mm.

5. PTERARTORIA POLYSTICTA n. sp.

Type.—1 ♀ (No. 7898) from Marcus Bay, Bredasdorp Division (H. A. Fry).

♀. *Carapace* a little longer than the fourth metatarsus and than the first tibia and metatarsus; colour dark brown, with radiating black lines, the submarginal stripe broken up into 3-4 yellow spots; the median yellow band broad, subrotund and provided with 2

dark spots on the cephalic portion, the thoracic portion of the band dilated anteriorly, narrower posteriorly. Anterior row of eyes considerably procurved, the median eyes slightly larger; second row considerably wider than the anterior row (by nearly $\frac{1}{2}$ an eye's diameter on each side), the eyes rather large and about a diameter apart; dorsal eye-area subquadrate, the anterior width equalling the length of the sides.

Abdomen infuscated laterally above and provided with a large, median, whitish area, which contains a narrow, median, black-margined yellow stripe on anterior half of abdomen and several median blackish markings in middle and posterior part of abdomen (the hairs on upper surface mostly rubbed off); under surface whitish. *Vulva* (pl. viii., fig. 9) a semicircular plate containing a triangular fovea, the bottom of which is convexly elevated along the middle.

Sternum and *legs* coloured as in the preceding species.

Chelicere reddish yellow, with oblique black band in front, the 3 inferior teeth subequal.

Total length $7\frac{1}{2}$ mm.

6. PTERARTORIA FISSIVITTATA n. sp.

Type.—1 ♀ (No. 5798) found at Grahamstown in November, 1899, by the Rev. J. A. O'Neil.

♀. *Carapace* with the median band rather narrow, the cephalic portion of the band only slightly enlarged and provided with a fine median dark line. Anterior row of eyes slightly procurved, the median eyes small, only slightly larger than the laterals; posterior median eyes about a diameter apart; dorsal eye-area about as wide in front as long at the sides.

Abdomen black, brown and gray at the sides, with strong, median, percurrent yellow band above, which is wider in front and contains a narrow, median, brownish yellow area bordered by 2 narrow black lines above the heart; under side pale yellowish, without stripes; the sides in the lower part pale yellowish, mottled with black. *Vulva* (pl. viii., fig. 10) with a pair of curved grooves posteriorly enclosing a short keel, which is dilated behind; the sides of the vulva with a reddish black, comma-shaped mark, the posterior end of the comma being tubercularly raised.

Legs.—Tibia I with only 2 inner and 1-2 outer spines below besides the apical pair; metatarsus I with long basal spines, scopulate at the sides for $\frac{3}{4}$ or more of its length.

Chelicerae with 3 inferior teeth, the distal tooth smallest.

Coxae and *sternum* pale yellowish, the latter partially infuscated.

Total length $8\frac{1}{2}$ mm.

GEN. LYCOSA Latr.

1. LYCOSA PATRICKI n. sp.

Specimens.—1 ♀ (type; No. 12521) and 1 ♂ (No. 12004), apparently belonging to the same species, found on the Commonage at Umtali, Mashonaland, by Mr. D. L. Patrick, in November, 1901.

Related to *capensis* Sim. (= *hectoria* Poc.), *schreineri* Purc., *darlingi* Poc. (= *subvittata* Poc.), &c.

♀. *Carapace* slightly shorter than the first tibia and metatarsus and as long as the fourth metatarsus and $\frac{1}{4}$ — $\frac{1}{3}$ of the tarsus; cephalic portion of median band broad, strongly constricted behind and furnished with a pair of longitudinal infuscate lines, the thoracic portion of the band dilated anteriorly but narrower than the cephalic portion. Anterior row of eyes moderately procurved, the median eyes distinctly larger; second row wider than the anterior row by about $\frac{1}{4}$ — $\frac{1}{3}$ of an eye's diameter on each side, the eyes very large, considerably less than a diameter apart, their distance from the anterior margin of the carapace also distinctly less than a diameter.

Abdomen pale fulvous yellow above, with a slightly darker median area and another on each side along the upper lateral borders, the median series of black transverse bars in posterior part almost obliterated; ventral surface pale yellowish. *Vulva* (pl. viii., fig. 11) much longer than wide, consisting of a \blacktriangle -shaped border enclosing a long subtriangular fovea, in which lies a long median bar whose posterior end is transversely dilated; posterior ends of the \blacktriangle dark reddish brown.

Chelicerae with some yellow hairs in front, the 3 inferior teeth subequal. *Sternum* reddish yellow.

Legs reddish yellow, the femora weakly banded, the posterior tibiae not banded.

♂. Dark areas on *abdomen* much blacker, the ventral surface posterior to the genital segment intensely black and sharply contrasting with the pale yellow of the sides and of the genital segment. *Sternum* with a long, narrow, U-shaped, black mark. Apex of third and base and apex of fourth *tibia* darkened.

Total length ♀ $18\frac{1}{2}$, ♂ $15\frac{1}{2}$ mm.

2. *LYCOSA GRACILITARSIS* n. sp.

Type.—1 ad. ♀ (No. 5343) from a Mission Station 20 miles east of Pietersburg, Transvaal (*Rev. J. W. Dancel*, 1898).

♀. Closely resembling *L. schreineri* Purc. (*Ann. S. A. Mus.*, v. 3, p. 35) from Hanover, Cape Colony, but differing principally in having the *eyes* of the second row larger and only $\frac{2}{3}$ of a diameter apart, and those of the first row also larger, especially the medians, which are very distinctly larger than the laterals and distant only about half their own diameter from the posterior median eyes (in *schreineri* distant at least their own diameter). Anterior row of eyes narrower than the second row by only $\frac{1}{4}$ or less of a posterior median eye's diameter on each side.

Carapace as long as the tibia and metatarsus of first leg and slightly longer than the metatarsus and $\frac{1}{2}$ the tarsus of fourth leg.

Chelicerae with white hairs in front and some yellowish ones. *Coxae* and *sternum* nearly black.

Abdomen similarly marked as in *schreineri*, but the 3 longitudinal dark bands paler; the greater part of the sides as well as the under surface of the abdomen black. *Vulva* with the foveae slightly longer than in *schreineri*.

Legs with the tarsi very slender; only the fourth tibia distinctly banded.

Total length 19 mm.

3. *LYCOSA AURATA* n. sp.

Type.—1 ♀ (No. 4196) from Barberton, Transvaal, collected by Mr. J. P. Cregoe in December, 1897.

♀. *Carapace* slightly longer than the tibia and metatarsus of first leg and subequal to the metatarsus and $\frac{1}{2}$ the tarsus of fourth leg; colour a rich brown on the broad lateral bands; the submarginal yellow bands narrow, with both edges lacinate, the outer edge bordered with black spots; surface covered with golden yellow hairs on the light bands, but on the dark bands black hairs predominate; median reddish yellow band almost parallel-sided, being only slightly wider in the middle than towards the ends, the cephalic portion flanked on each side by a parallel, narrow, yellow line which is suddenly bent at right angles at posterior end to join the median band. Anterior row of eyes lightly procurved, narrower than the second row by $\frac{1}{4}-\frac{1}{3}$ of a posterior median eye's diameter on each side, the anterior median eyes large, much larger

than the laterals and only about $\frac{1}{2}$ their own diameter from the posterior medians; posterior median eyes about $\frac{1}{2}$ a diameter apart.

Abdomen covered with golden and yellow hairs intermixed, the anterior half with a pair of golden yellow bands united in front and diverging posteriorly, the cuneate area enclosed between them with black at the sides; posterior half of abdomen with a median series of faint, transversely triangular markings; sides of abdomen pale yellowish below, with fine black dots; under side black. *Vulva* (pl. viii., fig. 12) longer than broad, subtriangular in outline, the median bar placed far behind, short, with a small fovea on each side; posterior outer corners of plate with a dark mark bearing a convexity.

Chelicerae with yellow hairs in front; the apex with 3 subequal inferior teeth.

Legs pale ochraceous, the femora with some faint infuscate marks, the fourth tibiae only faintly darkened at apex below; anterior tibiae and posterior metatarsi scopulate distally; basal spines on anterior metatarsus long, reaching base of mesial spines; coxae strongly infuscated.

Sternum broadly blackened along the middle, ochraceous laterally.

Total length $11\frac{1}{2}$ mm.

4. LYCOSA BIMACULATA n. sp.

Specimens.—(a) *Type*: 1 ad. ♀ (No. 9852) from East London, Cape Colony (*J. Wood*, 1901).

♀ *Carapace* clothed with whitish and pale yellowish hairs; its length slightly exceeding that of the tibia and metatarsus of first leg and subequal to that of the metatarsus and $\frac{1}{3}$ of the tarsus of fourth leg; the median ochraceous band strongly constricted in the middle and expanded before and behind the constriction to form a pair of equally large rotund areas of which the anterior one is bimaculate, the band narrowed again posteriorly and anteriorly, the narrow anterior part (between the eyes) separated from the anterior rotundate area by a smaller constriction; lateral margins yellow; the two brown bands black at posterior end. Anterior row of eyes slightly narrower than the second row and slightly procurved, the median eyes very distinctly larger than the laterals and distant about their own diameter from the posterior medians; posterior median eyes large, their distance apart scarcely exceeding $\frac{1}{2}$ their diameter.

Chelicerae with pallid hairs in front and 3 inferior teeth at apex, the distal tooth being smallest.

Abdomen (in spirits) blackened at the sides above, with fine whitish dots, the anterior half with a fusiform, brownish, median mark which is bordered laterally with some black and flanked on each side by a broad pale fulvous band uniting anteriorly, the posterior half of the dorsal surface with a double series of somewhat confluent, obliquely transverse, large, pale fulvous marks (some containing a black dot) separated by a median series of black, transverse, angular marks or bars; anterior surface with a pair of large intensely black marks; the sides whitish below, with some black spots; under surface black, with 2 white spots posteriorly, the lung-opercula pallid. Vulva (pl. viii., fig. 13) somewhat like that of *promontorii* Poc., but much longer than wide, with a large deep excavation behind containing a \perp -shaped elevation, of which the median bar is broad at the anterior end but narrow behind and the cross bar thick with rounded ends; the outline of the large excavation emarginate in front in the median line and also near the middle of each side.

Legs ochraceous, the femora with dark bands on the sides, the posterior tibiae darkened at the apex below; posterior metatarsi and anterior tibiae scopulate.

Sternum broadly blackened along the middle, ochraceous at the sides.

Total length $13\frac{1}{2}$ mm.

(b) 1 ♀ (No. 12698) from the Kentani District, Transkei, collected by Mr. H. P. Abernethy. All the tibiae black at apex.

(c) 1 ♀ and 1 ♂ (No. 5686) from Doornnek, in the Zuurbergen, Alexandria Division, collected by Mr. I. L. Drège in October, 1899. Under side of abdomen (except on the lung-opercula) almost wholly blackened and without the 2 white spots, the pale submarginal bands of carapace and the bands on the legs indistinct. In the ♀ the colouration is altogether much darker, the abdomen is almost uniformly mouse-brown above, and the carapace is slightly shorter than the tibia and metatarsus of first leg. In the ♂ the carapace is as long as the tibia and $\frac{1}{2}$ the metatarsus of first leg but considerably shorter than the fourth metatarsus.

Total length of ♀ $12\frac{1}{2}$, ♂ 10 mm.

Apparently closely allied to *aljoensis* Poc. (= *bessiana* Poc.).

5. LYCOSA UMTALICA n. sp.

Types.—2 ♀ ♀ (No. 12005) collected by Mr. D. L. Patrick in November, 1901, on the Commonage at Umtali, Mashonaland.

Closely allied to the foregoing, especially to var. (c).

♀ ♀. *Carapace* as long as the tibia and metatarsus of first leg and as the metatarsus and $\frac{1}{3}$ of the tarsus of fourth leg; thoracic portion of median band with the dilated portion smaller than in var. (c) of *bimaculata* n. sp., and in one specimen narrower than the cephalic portion, in which the black dots are obsolete; lateral edges blackened; hairs, even those on the paler bands, mostly black. Anterior row of eyes slightly narrower than the second row, the lower margins in a straight or only very slightly procurved line, the median eyes considerably larger than the laterals and less than their own diameter from the posterior median eyes; the latter a little more than $\frac{1}{2}$ their own diameter apart.

Chelicerae with yellowish hairs in front, the 3 teeth on inferior margin equal or the proximal one smaller.

Abdomen with the pattern on the dorsal surface similar to that in *bimaculata* n. sp., except that the fulvous marks are much smaller, each pair occupying only about $\frac{1}{2}$ of the width of the abdomen; sides thickly spotted with black; under surface very pale, with or without a pair of dark longitudinal lines and spots converging posteriorly from each side of the vulva. Vulva (pl. viii., fig. 14) very like that of *promontorii* Poc., about as long as broad, the median bar strongly dilated and emarginate in the middle anteriorly, narrow posteriorly, the transverse bar only a little wider than the anterior dilation and rounded at each end; the somewhat horseshoe-shaped border of the plate with a large dark oval mark near each end posteriorly.

Legs coloured as in *bimaculata* n. sp., but the posterior tibiae not darkened at apex below; tibiae of anterior legs without scopula; metatarsus of fourth leg with the scopula practically absent.

Sternum and *coxae* pale yellowish.

Total length $12\frac{1}{2}$ mm.

6. LYCOSA O'NEILI n. sp.

Specimens.—(a) 2 ♀ ♀ (No. 8382) and 1 ♂ (No. 5254) found at Dunbrody, on the Sundays River, Uitenhage Division, by the Rev. J. A. O'Neil.

Closely allied to *L. promontorii* Poc., having the head low and broad in front, the width of the head across the posterior row of eyes being more than twice the width of the second row of eyes.

♀ ♀. *Carapace* only a little longer than the fourth metatarsus but a little shorter than the first tibia and metatarsus together;

colour pale yellowish or reddish yellow, the surface for the most part clothed with black hairs; the darker lateral bands very lightly infuscated; the dark marginal and light submarginal stripes well developed; cephalic portion of median band broad, parallel-sided and containing 2 longitudinal, infuscate, parallel stripes, the posterior end strongly and suddenly constricted, the thoracic portion of the band narrow, almost parallel-sided, constricted posteriorly just behind the median stria. Eyes of the second row about $\frac{2}{3}$ of a diameter apart or less; the anterior row of eyes as wide as the second row, with the lower margins in a straight line, the median eyes much larger than the laterals.

Abdomen pale yellowish; the dorsal surface lightly or deeply infuscated, with a paler, yellowish median band, which is broad anteriorly (enclosing here a spindle-shaped black-bordered area outlining the heart) but narrow and often divided by transverse lines into sections, each bearing 2 black dots, posteriorly; anterior surface not more deeply blackened; sides of abdomen with some infuscate marks; under surface without bands. Vulva (pl. viii., fig. 15) with the median bar stout, widening anteriorly; the transverse bar with slightly convex posterior edge, about as long as the median bar.

Legs long, reddish yellow, some with faint infuscate marks, the distal segments long and slender and more reddish; anterior tibiae scopulate distally below; metatarsus I with the basal spines not reaching to the mesial spines.

Chelicerae with the 3 inferior teeth subequal or the distal one smaller. *Sternum* and *coxae* pale yellowish.

Total length $9\frac{1}{2}$ –12 mm.

♂. Carapace shorter than the metatarsus of fourth leg and as long as the metatarsus and $\frac{1}{2}$ the tarsus of first leg.

This species has much longer legs than the other 3 species of the group (*promontorii* and *spenceri* Poc., *rimicola* Purc.).

(b) 1 ♀ (No. 12651) from the Hot Baths near Montagu (W. F. P.).

(c) 1 ♀ (No. 7830) from Brandvlei, Worcester Division (*I. Meiring*). Carapace very faintly infuscated, almost unicolorous, the lateral yellow stripes represented by a few small spots and the median stripe very narrow and without cephalic branches; carapace as long as the tibia and metatarsus of first leg and a little less than the metatarsus and half the tarsus of fourth leg.

(d) 1 ♀ (No. 9747) from Port St. Johns, Pondoland (*Guy Shortridge*). Legs shorter even than in the preceding specimen.

7. LYCOSA NIVOSA n. sp.

Specimens.—(a) Types: 1 ♀ and 3 ♂♂ (Nos. 5854, 5837) from Retreat Flats, Cape Peninsula (*F. Treleaven*).

♂ ♀. *Carapace* as long as the metatarsus and $\frac{3}{4}$ of the tarsus of fourth leg and as the tibia, metatarsus, and $\frac{1}{4}$ – $\frac{1}{2}$ of the tarsus of first leg in both sexes; margins finely blackened; surface *without* well-marked longitudinal bands but covered with yellowish and snow-white hairs, the latter forming conspicuous patches or spots (visible when dry); head broad and obtuse in front as in *promontorii* Poc., &c., its width across the posterior row of eyes exceeding twice the width of the second row. Eyes of the second row rather small, less than their own diameter apart; the anterior row of eyes as wide as the second row, the lower margin in a nearly straight or slightly procurved line, the median eyes a little larger than the laterals.

Abdomen (in spirits) pale yellowish below or at least paler, the sides and dorsal surface black, the latter with a median yellowish mark on anterior half flanked by yellow spots on each side, sometimes almost the whole dorsal surface broadly yellowish; sides and dorsal surface covered with golden-olivaceous and white hairs, the latter forming a number of snow-white spots and patches.

Legs pale ochraceous, strongly banded with black on nearly all the segments and provided with rings of snow-white hairs; tibia I with only 2 inner inferior spines (the basal spine being absent) and 1–2 outer inferior spines; spines on metatarsus I small.

Sternum reddish yellow, with black margins.

Chelicere with the 2 distal inferior teeth subequal and larger than the minute proximal one, the middle tooth also placed closer to the proximal than to the distal tooth.

Vulva (pl. viii., fig. 16) of ♀ forming a rounded plate containing 2 large, shallow, oval depressions, separated by a median bar, the depressions converging anteriorly and containing each a deep fovea posteriorly; the foveæ with well-marked curved anterior rim and flanked on the outer side by a small round dark dot.

Total length ♀ $7\frac{1}{2}$, ♂ $5\frac{3}{4}$ – $6\frac{1}{4}$ mm.

(b) 3 ♀♀ and 3 ♂♂ (Nos. 3953, 3960) from the river-bed at Laingsburg, Prince Albert Division (September, 1896, *W. F. P.*). Abdomen in ♀♀ pale olivaceous yellow to nearly black, in the ♂♂ dark olive with broad, yellow dorsal area.

(c) 3 ♀♀ and 5 young (No. 3930) from Botterkraal, between Prince Albert and the railway station (found near water in September, 1896, by myself).

(d) 1 ♀ (No. 9432) from Hanover, Cape Colony (*S. C. Cronwright Schreiner*, 1901). Abdomen black above, with narrow median yellow stripe anteriorly.

(e) 14 ♀ ♀, 4 ♂ ♂, and 1 young (No. 8383) from Dunbrody, on the Sundays River, Uitenhage Division (1898, *Rev. J. A. O'Neil*). Dark-coloured specimens.

8. *LYCOSA LIGHTFOOTI* n. sp.

Specimens.—(a) 8 ♀ ♀ and 3 ♂ ♂ (types; No. 12170, &c.) from the Cape Peninsula (Retreat, Bergvliet and Maitland Flats, Kalk Bay and Table Mountains).

♀ ♂. Closely resembling *L. nivosa* n. sp., but differing in the form of the vulva and the number of the spines on the legs.

Abdomen black, the under surface yellowish (often black in ♂), the dorsal surface generally with paler, median anterior stripe and 3 yellow spots on each side of it, often followed by some transverse yellow bars posteriorly. Vulva with the 2 shallow depressions not converging but rather slightly diverging anteriorly.

Tibia of first leg generally with 3 inner inferior spines (the small basal spine being rarely absent).

Sternum dark brown or black.

Total length ♀ ♀ 5-7, ♂ ♂ 5 mm.

(b) 2 ♀ ♀ (No. 12384-5) from the Waterfall Mountains, Tulbagh Division (*R. M. Lightfoot*).

9. *LYCOSA CRETATA* n. sp.

Specimens.—(a) 2 ♂ ♂ (December) and 8 ♀ ♀ (November, December) (No. 6065, &c.), several with cocoons, from the Cape Peninsula.

Allied to *L. brunneipes* Purc.

♀ ♀. *Carapace* about as long as the metatarsus of fourth leg or the tibia together with from over $\frac{1}{2}$ to nearly $\frac{2}{3}$ of the metatarsus of first leg; dark lateral bands very broad; the marginal dark stripe often broader than the submarginal yellowish stripe, which is continued to anterior end of head; head with a second, short yellow stripe on each side just below the posterior eyes; thoracic portion of median yellow band narrow, almost parallel-sided throughout or dilated at hind end, the cephalic portion very broad, containing a black median stripe, the (-)shaped black stripes in the band only slightly curved, very well marked, extending up to the ocular area, their anterior and posterior ends generally united with the dark

lateral bands. Eyes of the second row their own diameter or slightly less apart; the anterior row slightly procurved, as wide as the second row, the median eyes scarcely larger than the laterals.

Abdomen in lighter coloured specimens yellowish, the upper surface with a broad, median yellow band shaped like that in *brunneipes* and broadly bordered with black on each side, the area above the heart covered with snow-white hairs and bordered with black; lateral parts of dorsal surface and the sides brownish yellow, with black dots; under surface yellow with obscure median patch or black band. In darker coloured specimens the whole abdomen may be blackish or brown, excepting a broad yellow band on each side of the median stripe on ventral surface and the yellow, white-haired, dorsal stripe above the heart, the large median band being paler brownish or even absent. Vulva (pl. viii., fig. 17) like that of *brunneipes*; the median lobe small, not larger than the lateral lobes.

Legs as in *brunneipes* in the lighter specimens but strongly infuscated and marked with yellow in the dark specimens.

Sternum pale yellowish, or strongly infuscated and with a fine, median yellow line. *Coxæ* pale yellowish, sometimes faintly infuscated in places.

Chelicerae with 3 subequal inferior teeth.

♂♂. Smaller; carapace shorter than the fourth metatarsus; tarsus of pedipalps small, shorter than the long, slender, curved tibia.

Total length ♀♀ 6-8, ♂♂ 6½ mm.

(b) 1 ♀ (No. 12650) from the Hot Baths near Montagu (W. F. P.).

10. LYCOSA DREGEI n. sp.

Specimens.—(a) 4 ♀♀ and 2 young (No. 5374) and 1 ♀ with cocoon (No. 8450), all collected at Van Stadens River, Uitenhage Division, by Mr. I. L. Drège in January of 1899 and 1900.

Allied to *brunneipes* Purc. in colouration and structure.

♀♀. *Carapace* a little shorter or longer than the fourth metatarsus and as long as the tibia and from over $\frac{1}{2}$ to $\frac{3}{4}$ of the metatarsus of first leg; colour reddish yellow, with broad, darkly infuscated bands and strongly blackened lateral margins; the (-)-shaped (often **W**-shaped) marks in the cephalic portion of the median band united with the dark lateral bands anteriorly and sometimes also with one another in the median line to form a **W**; thoracic portion of median band oval anteriorly, strongly constricted near hind end of stria;

pale submarginal stripe narrow, developed only in the posterior part of the thorax, obsolete on the head. Anterior row of eyes about as wide as the second row, the anterior margin in a slightly procurved line, the median eyes a little larger than the laterals.

Abdomen (in spirits) black above (in one specimen merely pale fulvous yellow and darkened only anteriorly), the posterior half without any band, the anterior half with a narrow, pale yellowish median band and with or without a short branch or separate parallel stripe on each side of the median one; sides wholly darkened, or pale yellowish with black spots or wholly pale yellowish; under side pale yellowish, sometimes with faint, median dark stripe. Vulva (pl. viii., fig. 18) much as in *brunneipes* but with the posterior emarginations more conspicuous and the dark lateral spots slightly further from the posterior margin and less black; the median lobe large, much wider than the lateral lobes.

Legs more or less banded, with infusate markings, or these markings obsolete; otherwise as in *brunneipes*.

Sternum lightly or darkly infuscated, with pale yellowish median line, at least anteriorly.

Chelicerae with the distal inferior tooth smaller than or subequal to the other two.

Total length $10\frac{1}{2}$ mm.

(b) 1 ♀ collected by Dr. H. Brauns at Willowmore, Cape Colony, in 1901.

(c) 1 ♀ (No. 7860) from East London (*J. Wood*).

(d) 1 ♀ and 1 ♂ (No. 8387) from Dunbrody, Uitenhage Division (1898, *Rev. J. A. O'Neil*). Legs of ♂ longer than in the ♀, the carapace as long as the tibia and $\frac{1}{4}$ of the metatarsus or the metatarsus and $\frac{1}{3}$ of the tarsus of first leg (fourth legs absent); pedipalps with the tibia curved and a little longer than the tarsus.

11. LYCOSA TENUISSIMA n. sp.

Type.—1 ♀ (No. 5688) from Doornnek, in the Zuurbergen, Alexandria Division (*I. L. Drège*, October, 1899).

Allied to *brunneipes* Purc.

♀. *Carapace* considerably shorter than the metatarsus and only a little longer than the tibia of fourth leg and about as long as the metatarsus and $\frac{1}{2}$ the tarsus of first leg; colour and markings much as in *dregei* n. sp., the ()-shaped markings on the head united with the dark lateral bands anteriorly, the thoracic portion of the median band narrower than in *dregei*. Lower margin of anterior row of eyes

almost straight, scarcely procurved, the median eyes considerably larger than the laterals.

Abdomen coloured as in the darkest specimens of *dregei*, but the under side without a distinct median stripe. Vulva much as in *cretata* n. sp., the median lobe of hind margin narrower than the well-developed, rounded lateral lobes; the 2 dark spots large and oval.

Chelicerae with 3 subequal inferior teeth.

Legs remarkably long and slender, especially the reddish distal segments; femora banded; basal spines on metatarsus I not reaching to the mesial spines.

Sternum and *coxae* pale ochraceous, the former darker round the edges.

Total length $15\frac{1}{2}$ mm.

This species is larger and has longer legs than any of the others of the group of forms related to *brunneipes* Purc.

12. LYCOSA BIAMPLIATA n. sp.

Specimens.—(a) 12 ♀ ♀ and 4 ♂ ♂ (types; Nos. 9312, 12305, &c.) found on the top of the mountains at Kalk Bay and Muizenberg, in the Cape Peninsula, by Mr. R. M. Lightfoot and myself. Also a number of other specimens from the tops of Simonstown and Table Mountains, and a few from Plumstead, St. James, and Hout Bay. The home of this species is moist sandy places on the summits of mountains.

Related to *brunneipes* Purc.

♀ ♀. *Carapace* as long as the metatarsus and $\frac{1}{6}$ – $\frac{1}{4}$ of the tarsus or as the tibia and $\frac{1}{3}$ – $\frac{2}{5}$ of the metatarsus of fourth leg, subequalling the tibia and metatarsus of first leg, but much longer than the metatarsus and tarsus; the surface more or less strongly blackened, the yellow submarginal stripe absent or represented only posteriorly; pale median band more or less yellow or reddish yellow (rarely, in very dark specimens, almost obliterated), the cephalic portion broad and rotund, strongly constricted posteriorly, often containing a pair of dark marks and followed by the similar, equally broad and rotund or narrower and oval middle thoracic portion, both these ampliations covered with white hairs; posterior part of median band nearly naked. Eyes of the second row more than their own diameter apart; the anterior row rather strongly procurved and a little narrower than the second row, the eyes subequal, small.

Abdomen black above, with a series of transverse black markings

down the middle, the second (situated in the middle of the abdomen) and following marks distinctly **W**-shaped and furnished with a round white spot on each side; the spaces between the black markings as well as the large area in front of the anterior mark sometimes dark but generally more or less yellowish and covered with white hairs, the anterior area often bordered by a pair of yellow lines which slightly diverge posteriorly; sides of abdomen mottled with black and white; under side pale yellowish, without stripes. Vulva (pl. viii., fig. 19) of the same type as in *brunneipes*; the median lobe equalling or slightly broader than the lateral lobes.

Legs yellowish, not browned distally, all the segments from the femur to the metatarsus strongly banded with black; scopula of anterior tarsi broadly divided by a double row of minute spines; basal spines of anterior metatarsi long.

Sternum black, sometimes with a yellow line in the middle.

Chelicerae pale yellowish at base, darkened distally; the distal inferior tooth nearly always smaller than the other two.

♂♂. Differ markedly in the colouration of the abdomen and legs from the ♀♀.

Abdomen with the anterior pair of yellow lines well marked, diverging, often very strongly, posteriorly, and followed by a broad, median yellow band, the latter bordered by black lines and generally also by a row of round white spots on each side; the **W**-shaped black marks obliterated along the median line.

Legs blackened proximally but pale yellowish distally, only faintly or scarcely at all banded; the patella, tibia, and metatarsus of the first pair covered with silvery white hairs.

Pedipalps long, the tibia curved, *slightly longer than the small tarsus*.

Length ♀♀ 6-9½, ♂♂ 5½-6½ mm.

The pattern on the carapace and abdomen is remarkably variable. In the specimens from Hout Bay and Table Mountain the lateral part of the dorsal surface is frequently brown or greyish. Sometimes the abdomen of the adult ♂ is coloured like that of a typical ♀, and *vice versa*, and occasionally the femora of the ♂ are strongly banded.

(b) 1 ♀ (No. 12377) from Ceres (*H. Hermann*).

(c) 1 ♂ (No. 12696) from the banks of the Breede River at Darling Bridge, Worcester Division (*H. Hermann*).

GEN. TRABÆA E. Sim.

1. TRABÆA LINEATA n. sp.

Specimens.—(a) An adult and a subadult ♀ (No. 6266) found at Kogmans Kloof, near Ashton, Robertson Division, in August, 1900, by my wife and myself.

♀ (*Type*). *Carapace* subequal to the fourth metatarsus in length but a little shorter than the first tibia and metatarsus; the surface with 6 well-marked, longitudinal bands; the median band pale ochraceous, broad, its cephalic portion slightly amplified, the posterior half of the thoracic portion narrower than the anterior half; black lateral bands as wide as the middle part of the median band; submarginal stripes pale yellow, broad, very sharply marked and parallel-sided; black marginal stripes also well marked. Anterior row of eyes strongly procurved, the medians situated some little distance above the line joining the upper margins of the lateral eyes; distance between the eyes of the second row distinctly exceeding their diameter; posterior quadrangle of eyes distinctly broader behind than in front, much broader than long, its lateral length less than its anterior width, the posterior eyes much smaller than those of the second row.

Sternum broadly oval, longer than broad, pale yellowish along the middle, infusate laterally.

Abdomen with pale yellowish median band or stripe above, and on each side of the band a row of dark spots, each bordered externally by a tuft of white hairs; anteriorly on each side is a broad black band; sides of abdomen densely spotted with yellow and black, or the black predominating; under surface pallid, finely spotted with black and provided with 3 black stripes (entirely black, with small white spots, in the subadult ♀). Vulva (pl. viii., fig. 20) resembling that of *Lycosa brunneipes* Purc., &c., and consisting of a simple plate with a 3-lobed posterior margin, the median lobe about as wide as the lateral ones and provided with 2 small brown convexities at the base, the lateral black spots on the plate remote from the hind margin.

Chelicerae pale yellowish in front, with a large oval ring of black; the 3 inferior teeth subequal.

Legs black, with pale yellowish stripes, the distal ends also more or less pale yellowish. All the tarsi with a long scopula on each side below, the scopula almost as well developed in the fourth as in the first leg. All the metatarsi with thin distal scopula on each side.

Spines on first tibia very long, the longer ones exceeding half the tibia in length.

Total length $7\frac{1}{2}$ mm.

(b) 1 ♀ (No. 12388) from the Waterfall Mountains, Tulbagh Division (*R. M. Lightfoot*, November, 1902). Legs lighter; oval marks on chelicerae C-shaped; abdomen not banded below.

(c) 1 ♀ (No. 5880) with cocoon from Clanwilliam (*R. M. Lightfoot*, November, 1899). Much lighter in colour, the legs yellowish, the abdomen without median band below, the chelicerae with a small basal and middle spot in front.

2. TRABÆA VARIA n. sp.

Specimens.—1 ♀ (No. 5865) from the Cedarbergen (between Clanwilliam and Pakhuis) and 1 ♂ (No. 5888) from Clanwilliam, both collected by Mr. R. M. Lightfoot in November, 1899.

♀ (*Type*). *Carapace* broad behind, much shorter than the fourth metatarsus and than the first tibia and metatarsus; colour pale yellowish, with a pair of broad, lightly infuscated lateral bands and narrowly infuscated lateral margins; submarginal stripes submoniliform, composed of 3 large, pale yellowish, partly confluent spots; head yellow, with a black patch at each eye. Anterior row of eyes less procurved, the median eyes placed slightly above the line joining the superior margins of the laterals, the eyes subequal; dorsal eye-area almost forming a square, being only very slightly wider behind than in front, and its lateral length only slightly less than its anterior width, the eyes of the second row very large and convex, their distance apart scarcely greater than their diameter, the posterior eyes also large.

Sternum pale yellowish, rotundate.

Abdomen pale yellowish, the upper and lateral surfaces with infuscate lines and markings. Vulva as in the preceding form.

Chelicerae pale ochraceous, with infuscate ring in front and 3 subequal inferior teeth.

Legs pale yellowish, strongly banded, except on the tarsi; tarsi I and II with thin, weak lateral scopula, tarsi III and IV and all the metatarsi apparently without any scopular hairs; spines on tibia I long but less than $\frac{1}{2}$ the tibia in length.

♂. *Carapace* (including the sides of the head) more darkly infuscated laterally, the submarginal yellow stripe narrow.

Abdomen black, with short, pale yellow median stripe in front.

Legs only faintly banded, pale yellowish, with some faint bands

on the femora; tibia I long and slender, thinner than the tibia of the pedipalps and clothed with a very few fine hairs.

Pedipalps with the femur infuscated, the patella and tibia pale yellowish; tibia slightly curved, much more than twice as long as thick, clothed with fine white hairs, its length a little exceeding that of the patella and only very slightly less than that of the tarsus; tarsus yellowish brown, the bulb + tarsus (seen from the side) slender, only a little thicker than the tibia.

Total length ♀ $5\frac{3}{4}$, ♂ $4\frac{1}{2}$ mm.

3. *TRABÆA UNICOLOR* n. sp.

Type.—1 ♂ (No. 3984) from French Hoek (*W. F. P.*, October, 1898)

♂. Whole spider unicolorous, pale yellowish; the head with a black patch at each eye; the spines and some of the hairs black.

Carapace shaped as in *varia* n. sp. Anterior row of eyes very strongly procurved; eyes of the second row smaller and less convex than in *varia* n. sp., their distance apart much greater than their diameter; posterior eyes rather small; dorsal eye-area parallel-sided but a little wider than long.

Sternum very broad, nearly rotund.

Legs.—Tibia I stout and rather short, stouter than the tibia of the pedipalps, thickly clothed with short black hairs above and longer ones below.

Pedipalps.—Tibia short and stout, not twice as long as thick, subequalling the patella in length but considerably shorter than the tarsus, and clothed with black hairs. Tarsus + bulb of palpal organ (seen from the side) small, not thicker than the tibia, the apical part of tarsus whitish.

Total length $3\frac{1}{4}$ mm.

4. *TRABÆA NIGRICEPS* n. sp.

Type.—1 ♂ (No. 5706) from Doornnek, in the Zuurbergen, Alexandria Division (*I. L. Drège*, October, 1899).

♂. *Carapace* broad, with a single, very wide, infusate median band; this band as wide as the ocular area, black in the ocular region but paler behind, parallel-sided, becoming narrower only quite posteriorly, its hind end with a yellow emargination; lateral parts of carapace very broadly pale yellowish, the margins with fine black lines and some submarginal spots. Head rather high in front, the distance of the eyes of the second row from the anterior margin, if anything, slightly greater than the diameter of these eyes, which is

also less than their distance apart; anterior row of eyes very strongly procurved; dorsal eye-area distinctly wider behind than in front and distinctly transverse, the anterior width distinctly exceeding the lateral length.

Sternum longer than broad, nearly rotundate, pale yellowish, with a black submarginal band on each side and a median black spot behind.

Abdomen black; under side pale yellowish, with a median row of black marks.

Chelicerae pale yellowish, with C-shaped black mark in front, the basal inferior tooth smaller than the other two.

Legs pale yellow, with small black spots and narrow bands, especially on the femora, the coxae with a black spot each in the middle below. Tibia I with ordinary pallid hairs, slightly slenderer than the tibia of the pedipalps.

Pedipalps pale yellowish; femur with some black spots; tibia blackened on the outer and especially on the inner surfaces, the blackened surfaces with long black hairs; seen from the side the tibia appears slightly curved, nearly twice as long as thick, subequal to the patella in length but a little shorter than the black tarsus; tarsus + bulb of palpal organ (seen from the side) stout, much stouter than the tibia.

Total length $4\frac{1}{3}$ mm.

GEN. ARTORIA Thor.

ARTORIA FASCICULARIS n. sp.

Specimens.—2 ♂♂ and 1 subadult ♀ from Maitland Flats and Hout Bay, in the Cape Division (Nos. 6089 and 12201), collected by my wife and myself.

♂♂ (*Types*). *Carapace* dark brown, high in front, flattened above, the flattened part thickly covered with closely appressed white hairs forming a broad parallel-sided median band; the lateral parts covered with olive-brownish hairs and the margins with whitish hairs. Dorsal eye-area subquadrate, slightly wider behind than in front, its lateral length equal to its anterior width; eyes of the middle row rather large, about $1\frac{1}{2}$ times their diameter apart; eyes of the anterior row subequal, the laterals situated below the centre of the eyes of the second row and about midway between these and the anterior margin of carapace, the median eyes with their lower margins a little below the level of the superior margins of the lateral eyes.

Abdomen with a very broad, almost parallel-sided median band of closely appressed, white or pale brownish yellow hairs, almost covering the dorsal surface, this band provided with scattered long black setæ and on each side posteriorly a series of fascicles of long white ones; sides of abdomen black, with brownish hairs, the lower parts with white hairs intermixed; ventral surface black.

Sternum black. *Chelicerae* with 2 inferior teeth.

Legs testaceous, clothed with white hairs, the femora partly infuscated or banded; anterior tarsi and at least the distal part of anterior metatarsi thinly scopulate at the sides; first tibia with 3 outer and 3 inner long spines in addition to a small apical pair.

Pedipalps brown, the tibia slightly longer than the patella, the two segments together much longer than the tarsus; palpal organ not prominent, provided with a sharp spur at outer edge near the middle and a smaller point both in front of and behind the spur, in addition to the curved apical process.

Total length ♂ ♂ $5\frac{1}{4}$ – $5\frac{1}{2}$ mm.

GEN. PARDOSA C. Koch.

1. PARDOSA LYCOSINA n. sp.

Specimens.—(a) 2 ♀ ♀ (No. 4234) from Dunbrody, on the Sundays River, Uitenhage Division (*Rev. J. A. O'Neil*).

♀ ♀. *Carapace* brownish black, with reddish yellow median and submarginal bands, all with zig-zag edges, the submarginal bands with white hairs. Anterior median eyes considerably larger than the laterals and much nearer to them than to one another, the lower margins of these eyes in a straight line.

Sternum brownish black, with short median yellow stripe anteriorly; in one specimen merely lightly infuscated.

Abdomen blackened, the dorsal surface with a median and 2 lateral yellowish stripes anteriorly, followed by paired yellowish transverse spots which are often confluent in pairs in the median line and provided each with one or more small black dots; ventral surface pale yellowish. Vulva (pl. viii., fig. 21) large, with large 3-lobed fovea behind containing a narrow median bar which is broadly dilated posteriorly, the ends of the cross bar themselves strongly curving forwards.

Legs dark, with alternate yellow and black bands; all the tarsi and the first 3 pairs of metatarsi scopulate, the posterior ones at the sides only; fourth metatarsus equal to or shorter than the tibia and patella.

Chelicerae with 3 inferior teeth, the proximal one smallest.

Length $5\frac{3}{4}$ –8 mm.

(b) 1 ♀ (No. 4272) from Clanwilliam (*R. M. Lightfoot*).

2. *PARDOSA UMTALICA* n. sp.

Specimens.—3 ♀ ♀ and 1 juv. (No. 12002) from Umtali, Mashonaland (on Baviaanskopje, 3 miles east of the town); also 1 ♂ apparently belonging to this species captured at the same time and place by Mr. D. Livingstone Patrick in June, 1902.

♀ ♀ (*Types*). *Carapace* with broad black lateral bands, the yellow median band narrower, its cephalic portion 3-pronged or almost obliterated; the submarginal yellow stripes very broad, furnished with 3 black markings laterally; the lateral borders narrowly blackened. Eyes much as in *lycosina* n. sp., but the anterior row with the lower margin in a straight or slightly procurved line.

Sternum pale yellowish. *Chelicerae* with 2 inferior teeth, the proximal one being smallest (rarely with a small third distal tooth).

Abdomen black, the dorsal yellow markings as in *lycosina* n. sp., or almost obliterated; ventral surface pale yellowish. Vulva (pl. viii., fig. 22) with longitudinal fovea, which widens posteriorly and contains a median keel, also dilated posteriorly.

Legs pale yellowish or more or less darkly infuscated, with black rings; fourth metatarsus equal to or longer than the tibia and patella; anterior legs weakly scopulate; inferior spines on anterior tibia and metatarsus long.

♂. *Carapace* blackened; median yellowish band present but the submarginal ones obsolete.

Legs very slender, the femora blackened, the more distal segments pale yellowish, lightly infuscated in parts, not distinctly banded.

Pedipalps black; the tarsus pale yellowish distally, terminating in a strong black claw, the outer edge deeply sinuate below, the bulb not large, occupying nearly two-thirds of the length of the tarsus, which is slightly less than that of the tibia and patella together.

Length ♀ ♀ 4–4½, ♂ 3¼ mm.

3. *PARDOSA FOVEOLATA* n. sp.

Specimens.—(a) 1 ♀ and 4 ♂ ♂ (No. 9803) from Port St. Johns, Pondoland (*Guy Shortridge*).

♀ (*Type*). *Carapace* broadly yellow in the middle, black at the sides. Anterior row of eyes lightly procurved, the medians larger than the laterals and much nearer to these than to each other.

Sternum black, with median yellow line. *Chelicerae* with the inferior middle tooth larger than the proximal and distal teeth.

Abdomen black, with yellow spots, the under side pale yellowish. Vulva (pl. viii., fig. 23) very large, containing a large, longitudinal, black-rimmed fovea, which is dilated behind.

Legs blackened, more yellowish distally, the third and fourth metatarsi blackened at apex; spines on anterior tibia and metatarsus long; fourth metatarsus subequal to the tibia and patella.

♂ ♂. *Carapace* as in ♀ or entirely black.

Abdomen almost entirely black, also below. *Sternum* black.

Legs with the femora blackened, the distal segments and the apex of the femora pale yellowish, but the distal two-thirds of the third metatarsus deep black.

Pedipalps black, the bulb not large, only about $\frac{1}{2}$ the tarsus in length and provided at base below with a short sharp process directed forwards and outwards, the distal part of the tarsus longish, cylindrical in appearance, when seen from the side, and covered above with a dark grey scopula; the tarsus longer than the tibia and patella together, the distal claw inconspicuous.

Length ♀ $4\frac{3}{4}$, ♂ ♂ $4\frac{1}{4}$ mm.

(b) 2 ♀ ♀ from Kentani, Transkei (*Rev. F. C. Kolbe*). Anterior row of eyes scarcely or not at all procurved.

(c) 2 ♀ ♀ from Van Stadens River, Uitenhage Division (*I. L. Drège*). Anterior row of eyes not procurved; legs and sternum yellowish in one specimen and black or at least very dark in the other.

(d) 1 ♀ from Pocaltsdorp, George Division (*Miss L. Leipoldt*).

(e) 1 ♂ from Umtali, Mashonaland (*D. L. Patrick*, November, 1901). Somewhat lighter in colour than the ♂ ♂ of the typical form.

4. PARDOSA LEIPOLDTI n. sp.

Specimens.—(a) 1 ♀ (No. 3562) from Clanwilliam (*C. L. Leipoldt*, October, 1897) and 1 ♂ from the same locality (*R. M. Lightfoot*, November, 1899).

♀ (*Type*). *Carapace* with infusate lateral bands, the median band narrow, pale yellowish, 3-pronged on the head, the submarginal stripes broad, pale yellowish, becoming slightly obscured towards the finely blackened lateral margins. Anterior row of eyes straight, the median eyes slightly larger than the laterals and nearer to them than to one another.

Sternum pale yellow, with 3 black marginal dots on each side and a large oval infusate mark with yellow centre nearer the middle.

Abdomen black above, with the usual yellow pattern (much as in *lycosa* n. sp.). The sides and under surface pale yellowish. Vulva (pl. viii., fig. 24) with long narrow fovea extending from anterior end and transversely widened posteriorly and containing a **L**-shaped keel, the cross bar of the keel with the ends bent forwards.

Legs pale yellow, with dark hairs but without rings and marked with black only at the junction of the femora with the trochanters; scopular hairs on anterior legs very scanty; spines on anterior tibia and metatarsus very long; fourth metatarsus equal to the tibia and patella.

Chelicerae pallid, the proximal inferior tooth small, the middle tooth large, larger than the distal tooth.

♂. *Carapace* with the submarginal yellow stripe on each side much narrower than in the ♀.

Abdomen with median yellow band above reaching to hind end.

Sternum blackened, with narrow yellow median line anteriorly.

Pedipalps pale yellowish; the tibia somewhat thickened distally, densely covered with deep black hairs; tarsus very slightly shorter than the tibia, its outer side with mesial sinus below, its free distal portion short and conical, forming only about $\frac{1}{3}$ of the entire length, the bulb not large, rounded below.

Length ♀ $5\frac{1}{2}$, ♂ $4\frac{1}{4}$ mm.

(b) 1 ♀ from Ramskop, Clanwilliam Division (*C. L. Leipoldt*).

(c) *Var. mashonica* n. var.—1 ♀ (No. 12527) with cocoon from Umtali, Mashonaland (*D. L. Patrick*). *Carapace* with the median band transversely dilated behind on the head, the thoracic portion also strongly dilated anteriorly; sides with a row of black spots in the broad yellow submarginal stripe. *Sternum* without infuscate marks, except a few black lines at the edges. *Legs* strongly banded with black (except on the tarsi), the first and fourth tibia especially being more black than yellow.

5. *PARDOSA CLAVIPALPIS* n. sp.

Specimens.—(a) 15 ♀ ♀, 2 ♂ ♂, and 3 juv. (Nos. 6130, 12182, &c.) from various parts of the Cape Peninsula (Bergvliet, Retreat, Capetown), collected by Mr. R. M. Lightfoot, who first found the species, and myself.

♀ ♀ (*Types*). *Carapace* infuscated, the median yellow band narrow, generally dilated behind on the head, the submarginal yellow stripe narrow, distinct or somewhat obscured, abbreviated anteriorly, covered with white hairs. Anterior row of eyes straight,

the median eyes larger than the laterals and nearer to them than to one another.

Sternum dark brown or black, sometimes with median yellow line in front.

Abdomen with the dorsal surface and the sides blackened, the dorsal surface with the usual yellow pattern; ventral surface pale yellowish. Vulva (pl. viii., fig. 25) allied to that of *leipoldti* n. sp., but differing in having the anterior part of the median groove and keel strongly widened.

Chelicerae with small proximal inferior tooth, large middle tooth, and large or small distal tooth.

Legs with alternate pale yellowish and infusate bands.

♂♂. *Carapace* and *abdomen* blacker, the submarginal yellow stripe of the former obsolete, the abdomen with a median infusate stripe below.

Legs pale yellowish, not transversely banded, the femora marked longitudinally and often also obliquely with black above, that of first leg broadly blackened in basal half in front and behind or in front only.

Pedipalps black, with some yellow on the patella; tibia slightly thickened distally and densely covered, like the basal half of the tarsus, with deep black hairs; tarsus slightly shorter than the tibia and patella, the free distal portion short, forming less than half of the whole length and provided above with the usual scopula; bulb not enlarged.

Length ♀♀ $5\frac{1}{4}$ – $6\frac{1}{4}$, ♂♂ 4 – $4\frac{3}{4}$ mm.

(b) 1 ♀ from Worcester (*R. M. Lightfoot*).

(c) 1 ♀ and 1 ♂ from the Hot Baths near Montagu (*W. F. P.*).

Legs of ♂ without the black dorsal stripe.

(d) 1 ♀ from Kimberley (*P. L. Selater*).

6. *PARDOSA CRASSIPALPIS* n. sp.

Specimens.—(a) 13 ♀♀ with cocoons, 5 ♂♂, and several young (Nos. 12613 and 12652) from the river-bed at the Hot Baths near Montagu, collected by my wife and myself in November, 1902.

♀♀ (*Types*). *Carapace* with black lateral bands, the median yellow band broad, dilated behind on the head; submarginal yellowish bands broad, with a row of black spots laterally, the margin itself marked with a series of black lines. Anterior row of eyes straight or slightly procurved, the median eyes larger than the laterals and nearer to them than to one another.

Sternum pale yellowish. *Chelicerae* with 3 inferior teeth, the proximal and generally also the distal tooth small, the middle tooth large.

Abdomen black at the sides above, the usual median pattern more or less fused to a single broad yellow area extending to hind end; lateral and ventral surfaces pale yellowish, the lateral surface with black spots. Vulva (pl. viii., fig. 26) with large, somewhat triangular fovea, which has wavy margins and is narrow in front, the broad posterior part containing a pair of black sublunate convexities.

Legs pale yellowish, spotted and banded with black, except on the tarsi; inferior spines on tibia and metatarsus of first leg very long.

♂ ♂. Resembling the ♀ in colour, except that the more distal segments of the legs are not banded and the first femur is more or less broadly blackened at base in front.

Pedipalps yellowish and infuscated, or more or less blackened, resembling those of *clavipalpis* n. sp., but with the tarsus very much enlarged and longer than the tibia and patella together, the free distal portion very short, forming scarcely $\frac{1}{4}$ of the whole length.

Length ♀ ♀ $4\frac{1}{4}$ – $5\frac{1}{4}$, ♂ ♂ 4– $4\frac{1}{2}$ mm.

(b) 7 ♀ ♀ with cocoons and 1 ♂ from Prince Albert (*W. F. P.*, September, 1896).

(c) 5 ♀ ♀ and 4 ♂ ♂ from Dunbrody, on the Sundays River, Uitenhage Division (*Rev. J. A. O'Neil*).

(d) 1 ♀ from Van Stadens River, Uitenhage Division (*J. L. Drège*, January, 1899).

(e) 4 ♀ ♀ from Doornnek, in the Zuurbergen, Alexandria Division (*J. L. Drège*, October, 1899).

(f) 3 ♀ ♀ from Hanover and Vlagkop (5–6 miles N. of Hanover) (*S. C. Crowright Schreiner*).

(g) 2 ♀ ♀ from Kentani, Transkei (*Rev. F. C. Kolbe*).

All these specimens are very similar in their colouration. The males are easily recognised by their remarkable pedipalps.

7. *PARDOSA SCHREINERI* n. sp.

Specimens.—4 ♀ ♀ with cocoons and 3 ♂ ♂ (No. 10052) from Hartebeeste Hoek, 9–10 miles S.E. of De Aar, Hanover Division (*S. C. Crowright Schreiner*, January, 1902).

♀ ♀ (*Types*). *Carapace* with the median yellow band moderately

wide, broadly dilated behind on the head, the submarginal yellow stripes very broad, with or without a row of black marks laterally, the lateral margins finely blackened. Anterior row of eyes straight, the median eyes larger than the laterals and nearer to them than to one another.

Sternum pale yellowish, with 2-3 black marginal dots on each side.

Abdomen black at the sides above, with the usual series of yellow dorsal markings; ventral surface and the sides pale yellowish, the sides more or less spotted with black. Vulva (pl. viii., fig. 27) with a deep triangular incision behind containing a brown cordate plate with a pair of longitudinal convexities and a median groove on its surface.

Chelicerae with the middle inferior tooth larger than the other two.

Legs pale yellowish, with faint or strong infuscate or black bands, at least on the more proximal segments; inferior spines on first tibia and metatarsus long.

♂ ♂. *Carapace* entirely blackened, except along the median band. Ventral surface of *abdomen* pale yellowish or more or less blackened. *Sternum* black. *Legs* pale yellowish, the anterior femora blackened at base in front, the other legs with the femora and some of the other segments often partly blackened.

Pedipalps black, resembling those of *crassipalpis* n. sp. in appearance, but not so large, the tarsus being slightly shorter than the tibia and patella together, the free distal part of the tarsus very short, forming only about $\frac{1}{4}$ of the whole length and terminating in a strong, conspicuous, curved black claw.

Length ♀ ♀ $4\frac{1}{2}$ - $4\frac{3}{4}$, ♂ ♂ 4 - $4\frac{1}{4}$ mm.

The males of the South African species of *Pardosa* known to me may be distinguished as follows:—

a. Tibia of pedipalps not much more densely hairy than the more proximal segments.

a¹. Tarsus of pedipalps with the free distal part which projects beyond the bulb short, forming only about $\frac{1}{3}$ of the whole length, appearing conical when seen from the side and terminating with a conspicuous curved claw.
Mashonaland *P. umtalica* n. sp.

b¹. Tarsus of pedipalps with the free distal part long, appearing more cylindrical when seen from the side, the terminal claw inconspicuous.

a². Palpal organ very large. Cape Colony *P. manubriata* Sim.

b². Palpal organ of moderate size. Pondoland, Mashonaland

P. forcolata n. sp.

- b.* Tibia of pedipalps thickly covered with stiff black hairs, especially below, and much more hairy than the more proximal segments.
- a*³. Tarsus of pedipalps much enlarged, longer than the tibia and patella together. Montagu, Pr. Albert and Uitenhage Divisions
P. crassipalpis n. sp.
- b*³. Tarsus of pedipalps smaller, not longer than the tibia and patella together.
- a*⁴. Tarsus of pedipalps with the free distal portion forming about $\frac{1}{4}$ of the whole length and ending with a very conspicuous, strong curved claw.
Hanover Division *P. schreineri* n. sp.
- b*⁴. Tarsus of pedipalps with the free distal portion longer, forming about $\frac{1}{3}$ of the whole length and without conspicuous claw.
- a*⁵. Pedipalps pale yellowish. Clanwilliam *P. leipoldti* n. sp.
- b*⁵. Pedipalps blackened. Cape and Montagu Districts
P. clavipalpis n. sp.

EXPLANATION OF PLATE VIII.

FIG.

1. *Anomalomma schreineri* n. sp. Vulva.
2. ,, *bisinuata* n. sp. Do.
3. *Proerippa lightfooti* n. sp. Do.
4. *Pterartoria subcrucifera* n. sp. Do.
5. ,, *caldaria* n. sp. Do.
6. ,, *sagæ* n. sp. Do.
7. ,, *flavolimbata* n. sp. Do.
8. ,, ,, ,, Palpal organ.
9. ,, *polysticta* n. sp. Vulva.
10. ,, *jissirittata* n. sp. Do.
11. *Lycosa patricki* n. sp. Do.
12. ,, *aurata* n. sp. Do.
13. ,, *bimaculata* n. sp. Do.
14. ,, *untalica* n. sp. Do.
15. ,, *o'neili* n. sp. Do.
16. ,, *nirosa* n. sp. Do.
17. ,, *erctata* n. sp. Do.
18. ,, *dreyei* n. sp. Do.
19. ,, *biampliata* n. sp. Do.
20. *Trabaca lineata* n. sp. Do.
21. *Pardosa lycosina* n. sp. Do.
22. ,, *untalica* n. sp. Do.
23. ,, *foreolata* n. sp. Do.
24. ,, *leipoldti* n. sp. Do.
25. ,, *clavipalpis* n. sp. Do.
26. ,, *crassipalpis* n. sp. Do.
27. ,, *schreineri* n. sp. Do.